

**QP CODE: 311006 (new scheme)**

**Reg.No: .....**

**Third Year B.Pharm Degree Examinations June 2017**

**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. Define r-DNA. Explain various methods of r-DNA technology.
2. Define fermentation. Describe the principle, design and construction of fermenter.
3. Define virus. Classify them and explain their morphology, structure and cultivation.

**Short notes**

**(14x5=70)**

4. Classify microbes based on their taxonomy.
5. Brief about differential and selective medium.
6. Method of isolation of pure culture.
7. Techniques of isolation of mutants.
8. Types of antibody.
9. Brief immunological tolerance.
10. Difference between active and passive immunization.
11. Principle involved in radiation sterilization.
12. Various methods of chemical sterilization with example.
13. Standardization of antibiotics.
14. Down-streaming process of amylase with diagram.
15. Selection of microorganisms for microbial transformation.
16. Types of reaction mediated by microorganisms in microbial transformation.
17. Lysogenic cycle of virus with example.

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