

# **2012 Scheme**

**Q P CODE: 311006**

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

## **Third Year B.Pharm Degree Supplementary Examinations March 2025 Pharmaceutics III**

**(Pharmaceutical Microbiology and Biotechnology)**

**Time: 3 Hours**

**Total Marks: 100**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Write chemical structures/equations wherever necessary.*

### **Essays**

**(3x10=30)**

1. Define disinfectants. What are the ideal properties of a disinfectant and explain the factors influencing the disinfectants.
2. Describe genetic recombination and elaborate on the different methods used in genetic recombination.
3. What is hypersensitivity reaction. Classify and explain the different types of hypersensitivity reactions.

### **Short notes**

**(14x5=70)**

4. Explain viral replication and the steps involved in viral replication.
5. Classify immunity and explain the types of immunity.
6. Explain the importance of standardization in ensuring vaccine safety.
7. Describe the different techniques of immobilization of enzymes.
8. Write a note on sterility testing of pharmaceutical products.
9. Describe the production and use of vitamin B<sub>12</sub>.
10. Define prokaryotes and explain the structure of a prokaryotic cell.
11. Briefly explain antigen-antibody reactions with example.
12. Explain types of microbial transformation reactions with examples.
13. Medical and pharmaceutical importance of fungi.
14. Write a note on cultivation of anaerobic bacteria
15. Explain IMViC Test.
16. Discuss briefly the various steps of rDNA technology.
17. Explain the principle and application of autoclave.

\*\*\*\*\*