

# **2012 Scheme**

**Q P CODE: 311006**

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

## **Third Year B.Pharm Degree Supplementary Examinations September 2024 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. Draw an ultra-structure of typical bacteria cell. Write the composition and functions of its cell organelles.
2. Explain the principle, procedure, applications, and demerits of hot air oven.
3. Explain the role of fermentation in the production of penicillin and the steps involved in the fermentation process, extraction for producing penicillin.

**Short notes**

**(14x5=70)**

4. Describe the different types of microscopy techniques.
5. Explain the different methods of sterilization validation.
6. Describe the factors influencing rate of mutation.
7. Discuss the various methods in the cultivation of viruses.
8. Describe the different methods in the evaluation of disinfectants.
9. Explain about bacterial transformation and conjugation.
10. Describe the different techniques of immobilization of enzymes.
11. Elucidate transgenesis and its application.
12. Explain the design and control of a fermenter.
13. What are monoclonal antibodies. Write a note on the production of monoclonal antibodies.
14. Write a note on microbial transformation.
15. Explain the methods in microbial assay of antibiotics.
16. What is pure culture. Write in detail about isolation of pure culture.
17. Define immunity and explain the primary and secondary defensive mechanisms of body.

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