

# **2010 Scheme**

**QP CODE: 301006**

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

## **Third Year B.Pharm Degree Supplementary Examinations August 2023**

### **Pharmaceutics IV**

#### **(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 and explain the methods of sterilization. Explain the principle, procedure, advantages and disadvantages of moist heat sterilization method.
2. Classify and explain the structure of viruses. Describe about viral replication.
3. Define fermentation. Explain fermenter design with a neat diagram. Explain the control of different parameters.

**Short notes**

**(14x5=70)**

4. What are endospores. Explain the mechanism of spore formation.
5. Explain fluorescence and electron microscopy.
6. Write the medical and pharmaceutical importance of fungi.
7. What is mutation. Brief the factors influencing rate of mutation.
8. Explain protoplast fusion and conjunction.
9. Aerobic and anaerobic bacterial culture methods.
10. What are disinfectants. Explain the dynamics of disinfection.
11. Write on standardization and storage of vaccines.
12. Explain types and process of fermentation.
13. Explain biotransformation process and with specific reference to steroids.
14. Define the terms  
a) Antigen    b) Haptens    c) Immunological tolerance    d) Hypersensitivity.
15. Validation of sterilization methods and equipments.
16. Turbidity assay of antibiotics.
17. Brief on the method of rDNA technology.

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