

# **2012 Scheme**

**Q P CODE: 311006**

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

## **Third Year B.Pharm Degree Supplementary Examinations June 2022 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. Discuss briefly about different techniques of immobilization of enzymes.
2. Explain the role of hybridoma technology in the development of monoclonal antibodies.
3. Define recombinant DNA technology. Explain the characters of a cloning vector. Write about the different enzymes involved in the recombinant DNA studies.

### **Short notes**

**(14x5=70)**

4. Explain the principles of microbiological assays of antibiotics.
5. Discuss about screening of soil for organisms producing antibiotics.
6. Explain the media and conditions used for alcohol production.
7. Write about the sterility testing methods.
8. Describe the fermenter design and control of various parameters.
9. Discuss briefly about validation of sterilization methods.
10. Explain the principle involved in acid-fast staining and how it differs from Gram's staining.
11. Explain the standardization of bacterial vaccines.
12. Explain the identification of bacteria with emphasis to biochemical reactions. Give two examples.
13. Discuss briefly on culture media used for bacteria and fungi.
14. Enumerate various methods for the evaluation of disinfectants.
15. Define sterilization. Classify different methods of sterilization.
16. Replication of viruses
17. Hypersensitivity

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