

**QP CODE: 301006 (old scheme)**

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

Third Year B.Pharm Degree Supplementary Examinations – January 2017

**PHARMACEUTICS IV**  
**(Pharmaceutical Microbiology and Biotechnology)**  
**(2010 Scheme)**

**Time: 3 Hours**

**Total Marks: 100**

- Answer all Questions.
- Draw diagram wherever necessary.

**Essay**

**(3x10=30)**

1. Draw a neat labelled diagram of bacterial cell and explain in detail about flagella and spores.
2. Explain about various steps involved in monoclonal antibody technology.
3. List out various methods used for sterilization and explain in detail about autoclave.

**Short notes**

**(14x5=70)**

4. ELISA test
5. Classify bacterial culture media and explain about differential and selective media.
6. Principle and procedure involved in gram staining.
7. Cultivation of virus
8. Classify hypersensitivity reactions and explain about immediate type hypersensitivity reaction.
9. Transduction
10. Evaluation of disinfectants.
11. Test for sterility
12. Production of poliomyelitis vaccine
13. Differentiate cellular and humoral immunity
14. Radiation and filtration sterilization
15. Immunological tolerance
16. List out antigen – antibody reactions and explain about agglutination.
17. Morphology and reproduction of fungi.

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