

Second Year Pharm D Degree Examinations - October 2012

Pharmaceutical Microbiology

Time: 3 Hours

Total Marks: 70

- Answer all Questions.
- Draw Diagrams wherever necessary.

Essay

(2x10=20)

1. Define sterilization. Elaborate on the physical methods of sterilization like heat and radiation.
2. Draw a neat labeled diagram of a bacterial cell. Describe the cell wall and flagella of the bacteria

Short notes

(10x3=30)

3. Define immunity and mention the differences between active & passive immunity
4. Define and classify culture media
5. Describe bacterial growth curve with a neat labeled diagram,
6. Gram stain and Ziehl-Neelson stain
7. Explain the structure of an antibody. Add a note on IgG antibody
8. Maintenance of lab cultures
9. Describe the principle of western blot technique
10. **Explain** the principle of microbial assay of vitamins
11. Standardization of a vaccine
12. Pathogenesis and lab diagnosis of HIV

Answer briefly

(10x2=20)

13. Contributions of Antony van Leeuwenhoek and Edward Jenner
14. Define and classify stains
15. Differentiate between autotrophs and heterotrophs
16. Difference between bacteria and virus
17. Evaluation of a bactericidal agent
18. What is the influence of temperature on bacterial growth
19. Name several applied areas of microbiology. Describe importance of microorganisms in the applied fields
20. Define the terms: Phagocytosis, bacterial strain, -pure culture and exotoxins
21. Schick test
22. Classification of fungi