



International Islamic University Chittagong
Department of Pharmacy, Program- B. Pharm (Hons)
Final Examination, Semester: Spring-2018

Course Code: Pharm-2403, Course Title: Pharmaceutical Microbiology & Immunology-II

Marks: 50

Time: 2 Hour 30 min

[N.B: Answer of separate groups should be given in separate script. Figures in right margin indicate marks]

Group-A **Answer any Two Questions** **Marks-20**

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|----|---|-----|
| a) | Define the microorganisms "Rickettsiae". How can you compare Rickettsiae with bacteria? | 3 |
| c) | Write short note on the term "pathogenesis of Rickettsia". | 4 |
| d) | Explain the therapy and prophylaxis of "Rickettsioses". | 3 |
| a) | Mention the selected sterilization protocols for three different bacillus biological indicators. | 1.5 |
| b) | State in brief of the time, pressure and temperature relationships of autoclaving. | 3 |
| c) | Deduce the main constructional features of a large scale steam sterilizer. | 5.5 |
| a) | Cite the typical conditions employed in the following types of sterilization of pharmaceutical and medical products: dry heat, ethylene oxide gas, filtration | 3 |
| b) | Write short note on "Sensitivity of microorganisms for sterilization" | 3 |
| c) | Mention the relative merits of ethylene oxide over formaldehyde gas for sterilization. | 2 |

Group-B **Answer any Three Questions** **Marks-30**

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|----|---|---|
| a) | Write down the function of B-Cell. | 4 |
| b) | Briefly describe the classification of immunity. | 3 |
| c) | Differentiate between cell mediated immunity and humoral immunity. | 3 |
| a) | What do you mean by NK-Cell? Mention its function. | 3 |
| b) | What is the role of macrophage in immunity? | 3 |
| c) | Cite the cell involved in immune response. | 3 |
| a) | Write down the functional classification of T-cells. | 4 |
| b) | How does dendritic cell work? | 3 |
| c) | What are the routes of antigen entry? | 3 |
| a) | Define the terms: i) Hypersensitivity | 2 |
| b) | How many categories of hypersensitivity reactions may be defined by the highly influential Gell and Coombs classification schemes? Describe individually. | 8 |