



International Islamic University Chittagong

Department of Pharmacy

Program: B. Pharm (Hons)

Examination: Final

Session: 2019

Semester: Spring

Course Code: Pharm-2407

Course Title: Pharmaceutical Microbiology and Immunology-II

Full Marks: 50

Time: 2 Hours and 30 Minutes

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

Group A (Marks: 20)

Answer any two questions

1. a) Define the term "Sterilization". Briefly describe dry heat method and gas sterilization method. 4.5
- b) Cite the main constructional features of a large-scale steam sterilizer (autoclave). 3.5
- c) Write a short note on the sensitivity of organisms on sterilization. 2
2. a) Define the term "Rickettsiae". Mention the distinguishing characteristics of Rickettsiae? 3
- b) Write down the morphological features of Rickettsiae. 2
- c) Describe the diagnostic process of "Pathogenesis". 3
- d) Illustrate the prophylactic treatment for Rickettsioses. 2
3. a) Mention any three industrial products (other than antibiotics) produced by bacteria along with causative microorganisms and their uses. 3
- b) What are the prerequisites to an economically practicable industrial microbiological process? 2.5
- c) What do you know about plasma substitute? "Dextran is the most widely plasma substitute in pharmaceutical field"-Justify the statement. 2
- d) Shortly describe on Dextran-40 injection. 2.5

Group B (Marks: 30)

Answer any three questions

4. a) What do you mean by immune response? What are the steps of immune response? 3
- b) What is your idea about innate immunity? Mention its components. 3
- c) Explain the role of B-cell in adaptive immunity. 4
5. a) What do you know about lineage and function of NK cell? 4
- b) How does cytotoxic T-cell play role in defense mechanism? 3
- c) Analyze the influence of co-stimulation in immune response. 3
6. a) Describe the general structure of antibody. 3
- b) What are the different types of antibody? 3
- c) Classify different types of hypersensitivity with examples. 4
7. a) What are the characteristics of fungi? Mention the uses of fungi in pharmacy. 4
- b) Describe different ways by which fungi reproduce asexually. 4
- c) Mention the various taxa along with ending terms (Suffix) of taxonomical 2