



FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA
Third Examination for Medical Degrees Part I - October 2012
MEDICAL MICROBIOLOGY - Paper II

Tuesday 9th October 2012

10.30 am to 12.30 pm

Answer ALL FOUR questions.

Answer each question in a separate answer book.

1. A 30 year-old male presented to the OPD with fever and cough of 7 days duration. He was diagnosed as having mild community acquired pneumonia. Antibiotic therapy was initiated with oral amoxicillin. Three days later he presented with no improvement of his symptoms.
 - 1.1 List three bacterial pathogens causing community acquired pneumonia. (10 marks)
 - 1.2 List the microbiological laboratory investigations you would perform to confirm the diagnosis of community acquired pneumonia. (15 marks)
 - 1.3 Describe the collection of the clinical specimen/s required for the investigations stated in 1.2, including the advice given to the patient and how they are transported to the laboratory. (40 marks)
 - 1.4 Explain why this patient did not respond to oral amoxicillin therapy. (20 marks)
 - 1.5 What empiric antibiotic therapy would you recommend to patient? (15 marks)

2. Write briefly on
 - 2.1 the similarities and differences between active and passive immunity, giving examples. (35 marks)
 - 2.2 the serological markers of hepatitis B virus infection and describe the significance of their presence or absence in blood. (35 marks)
 - 2.3 the microbiological laboratory investigations performed to diagnose typhoid fever and discuss their significance in relation to the duration of the illness. (Information on collection and transport of specimens is not required.) (30 marks)

3. Write briefly on
 - 3.1 the pre and post exposure prophylaxis of chicken pox. (35 marks)
 - 3.2 the post exposure prophylaxis of rabies following a stray dog bite on the face. (30 marks)
 - 3.3 the microbiological investigations of dengue fever in relation to the duration of fever and the interpretation of results. (35 marks)

4. Describe the microbiological tests including collection and transport of specimens for the diagnosis of the following conditions.
 - 4.1 Pulmonary tuberculosis (30 marks)
 - 4.2 Poliomyelitis (35 marks)
 - 4.3 Fungal infection of the nails (35 marks)