



FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA
Third Examination for Medical Degrees Part I – September 2014
MEDICAL MICROBIOLOGY - Paper II

Friday 19th September 2014

10.30 a.m. to 12.30 p.m.

Answer ALL FOUR questions.

Answer each question in a separate answer book.

1. A 36 year-old female presented to the OPD with fever and cough of 6 days duration. She was diagnosed to have mild community acquired pneumonia. Antibiotic therapy was initiated with oral amoxicillin after collecting appropriate clinical specimens. Three days later she presented with no improvement of her symptoms.
 - 1.1 List three bacterial pathogens causing community acquired pneumonia. (15 marks)
 - 1.2 List the microbiological laboratory investigations you would perform in a patient with community acquired pneumonia. (10 marks)
 - 1.3 Describe the collection of the clinical specimens required for the investigations stated in 1.2, including the advice given to the patient and how they should be transported to the laboratory. (35 marks)
 - 1.4 Explain possible reasons why this patient did not respond to oral amoxicillin therapy. (10 marks)
 - 1.5 If the microbiological investigations did not grow any pathogens on routine culture media what could be the most likely bacterial pathogen? (10 marks)
 - 1.6 State the serological investigation you would perform to confirm the aetiological diagnosis stated in 1.5. (10 marks)
 - 1.7 What is the recommended antibiotic therapy against the pathogen stated in 1.5? (10 marks)

2. Briefly describe the steps that should be adopted in the following situations.
 - 2.1 Cleaning a blood spill on the floor of the laboratory. (30 marks)
 - 2.2 Managing a stray dog bite on the hand of a 5 year-old child. (35 marks)
 - 2.3 Managing a health care worker who sustained a needle stick accident while drawing blood from a known hepatitis B carrier. (35 marks)

3. Write notes on
 - 3.1 pityriasis versicolor. (35 marks)
 - 3.2 type I hypersensitivity. (35 marks)
 - 3.3 vancomycin. (30 marks)

4. State the causative pathogen/s and describe the microbiological investigations with special reference to collection and transport of specimens in the following conditions.
 - 4.1 Pulmonary tuberculosis in a 60 year-old male. (35 marks)
 - 4.2 Genital ulcers in a 35 year-old female. (35 marks)
 - 4.3 Viral upper respiratory tract infection in a 6 year-old boy. (30 marks)