



FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA  
Third Examination for Medical Degrees Part I – June 2020  
MICROBIOLOGY - Paper II

Monday 22<sup>nd</sup> June 2020

10.30 a.m. to 12.30 p.m.

Answer ALL FOUR questions.

(2 hours)

Answer each question in a separate answer book.

1. A 50-year-old farmer was admitted to the hospital with fever, jaundice and conjunctival injection following paddy harvesting.
  - 1.1 What is the most likely diagnosis? (05 marks)
  - 1.2 What is the likely causative pathogen? (10 marks)
  - 1.3 List the microbiological investigations that would help in confirming the clinical diagnosis and briefly describe the collection and transport of the relevant specimens. (30 marks)
  - 1.4 Briefly discuss the interpretation of the results of the investigations listed in 1.3. (15 marks)
  - 1.5 List **three (3)** antibiotics recommended in the treatment of this patient. (10 marks)
  - 1.6 Name **four (4)** possible complications that this patient is likely to develop. (10 marks)
  - 1.7 Briefly describe the prevention and control of the condition mentioned in 1.1. (20 mark)
  
2. Briefly describe the steps that should be adopted in the following situations.
  - 2.1 Needle prick injury in a health care worker who has completed hepatitis B vaccination one year ago. (35 marks)
  - 2.2 A household contact of a patient having COVID-19. (30 marks)
  - 2.3 Disposal of syringes and needles which have been used for blood drawing. (35 marks)
  
3. Write briefly on
  - 3.1 hepatitis B vaccine. (35 marks)
  - 3.2 beta-lactam and beta-lactamase inhibitor combination antibiotics. (35 marks)
  - 3.3 IgG antibodies. (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 Onychomycosis in a security officer. (35 marks)
  - 4.2 Urinary tract infection in a 25-year-old male. (30 marks)
  - 4.3 An adult male suspected of having pulmonary tuberculosis. (35 marks)