



UNIVERSITY OF RUHUNA
FACULTY OF MEDICINE
Third Examination for Medical Degrees (Part I)
20th April 2021



MICROBIOLOGY – Paper II
10.30 a.m. to 12.30 p.m. (2 hours)
Answer ALL FOUR questions.

Answer each question in a separate answer book

1. A 35-year-old male was admitted to the hospital with fever, headache and constipation for 5 days. On examination he was found to have splenomegaly. The clinician suspects that the patient is having enteric fever.
 - 1.1 List **three (3)** likely causative pathogens. (10 marks)
 - 1.2 Outline the pathogenesis of enteric fever. (20 marks)
 - 1.3 List **three (3)** most appropriate microbiological investigations that would help in confirming the aetiological agent in enteric fever. (10 marks)
 - 1.4 Briefly describe the collection and transport of the most relevant specimen to confirm the diagnosis in this patient. (30 marks)
 - 1.5 State **two (2)** antibiotics which are used in the treatment of this condition. (10 marks)
 - 1.6 Name **two (2)** possible complications of this condition. (10 marks)
 - 1.7 List **three (3)** measures that can be taken to prevent this condition. (10 marks)
2. Briefly describe the steps that should be adopted in the following situations.
 - 2.1 A medical student who has not been immunized against hepatitis B, sustains a cut injury while assisting in a surgery. (35 marks)
 - 2.2 A newly recruited employee is found to be VDRL positive at the routine medical examination. (35 marks)
 - 2.3 Multiple bites with bleeding on the leg of a child by an unobservable stray dog. (30 marks)
3. Write briefly on
 - 3.1 *Haemophilus influenzae* type b (Hib) vaccine. (35 marks)
 - 3.2 carbapenem antibiotics. (35 marks)
 - 3.3 primary immunodeficiency (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 Tinea corporis in a young adult. (35 marks)
 - 4.2 Renal tuberculosis in a farmer. (30 marks)
 - 4.3 Viral pneumonia in a 5-year-old child. (35 marks)