



FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA, GALLE
Third Examination for Medical Degrees – Part I
July 2013
PARASITOLOGY – Paper II

Monday 15th July, 2013

10.30 a.m. to 12.30 p.m.
(2 hours)

Answer all four questions
Illustrate your answers with labeled diagrams wherever necessary
Answer each question in a separate book

1. A 16 day-old male neonate was brought to the Paediatrics Professorial Unit, Teaching Hospital Karapitiya with complaints of intermittent fever and abdominal distension for 10 days. He was the first child of a 20 year-old mother. A history of fever with chills in her eighth month of pregnancy was obtained from the mother.
On examination the neonate was febrile and pale but not icteric. The liver and spleen were palpable 3 cm and 6 cm below right and left costal margins respectively. A capillary blood smear showed a few malaria trophozoites with amoeboid cytoplasm, large chromatin dots and fine, yellowish-brown pigment.
 - 1.1. What is the most likely diagnosis? (10 marks)
 - 1.2. Name **three** morbidities indicated in the above case scenario. (15 marks)
 - 1.3. Describe the pathophysiology of morbidities mentioned in 1.2. (30 marks)
 - 1.4. Discuss the drug treatment in the management of above case scenario. (25 marks)
 - 1.5. Describe the prevention of the disease entity mentioned in 1.1. (20 marks)

2. Describe briefly
 - 2.1. the facilities that should be available in an ideal set-up to manage highly poisonous snake bites. (50 marks)
 - 2.2. the Sri Lankan parasite eradication programmes. (50 marks)

3. Answer following questions giving examples wherever necessary.
 - 3.1. Name **four** important specimens used in the diagnosis of parasitic diseases in human. (10 marks)
 - 3.2. Describe the methods of preservation of human specimens mentioned in 3.1. (15 marks)
 - 3.3. Name **five** parasitic stages screened for diagnosis of diseases. (15 marks)
 - 3.4. Describe the diagnostic tests that will be used in the identification of parasitic stages mentioned in 3.3. (20 marks)
 - 3.5. Describe the drug treatment against parasitic stages mentioned in 3.3. (20 marks)
 - 3.6. Describe the prevention of transmission of parasitic stages mentioned in 3.3. (20 marks)

4.

4.1 An 11 year-old boy presented to THK with myalgia, headache, low-grade fever, vomiting and a stiff neck 6 days. He had traveled to Thailand several times with his parents. On specific questioning, the boy admitted that he had eaten a raw snail when he was in Thailand. Investigations revealed marked eosinophilia (26 %) on the third day of hospitalization. Serologic tests for *Toxocara canis* and *T. cati* were negative. Serum IgG for *Toxoplasma gondii* was undetectable. Final clinical suspicion was eosinophilic meningoencephalitis due to a nematode.

- 4.1.1. What is the most possible parasite to cause above case scenario? (10 marks)
- 4.1.2. Describe the mode of human transmission of above parasite? (20 marks)
- 4.1.3. Explain why anti-helminths are not recommended in this condition? (10 marks)
- 4.1.4. Name another clinical presentation of same parasitic infection. (10 marks)

4.2 The 3rd pandemic of bubonic plague was begun in the Yunnan province in China in 1855. This episode of bubonic plague spread to all inhabited continents and ultimately killed more than 12 million people in India and China alone. According to the World Health Organization, the pandemic was considered active until 1959, when worldwide casualties dropped to 200 per year.

- 4.2.1. Name a reservoir host which was responsible for the above pandemic. (10 marks)
- 4.2.2. Name a major vector which was involved in the transmission of above disease. (10 marks)
- 4.2.3. Describe the vector's biological factors which increase the disease transmission. (30 marks)
