



**UNIVERSITY OF RUHUNA
FACULTY OF MEDICINE**

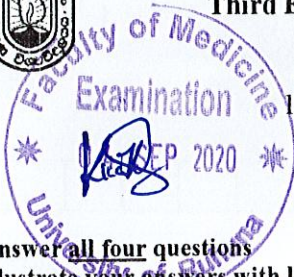
**Third Examination for Medical Degrees (Part I)
4th September 2020**

PARASITOLOGY – Paper II

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



Q1



Index number

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Answer all four questions
Illustrate your answers with labelled diagrams wherever necessary
Use only the space provided for answering

1. A previously healthy 34-year-old local worker at Pelwatta Sugar Industries, Buttala presented to a hospital with high fever with chills and rigours in every third-day. The blood picture showed multiple ring stages. The factory was visited by an Indian engineer three weeks ago for a brief inspection. The Indian was treated only with one drug for a mild febrile illness with headache in an Indian hospital prior to his visit to Sri Lanka. The Indian also has shown multiple ring stages in his blood picture.

1.1. Name the most probable parasite which can cause the above presentation. **(10 marks)**

1.2. Briefly explain how the local worker has contracted the parasite mentioned in 1.1. **(20 marks)**



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1.3. Describe briefly three (03) methods available to confirm infection in the local factory worker.

(30 marks)

1.4. Outline the plan of management for the local patient.

(30 marks)



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1.5. State two important steps taken by the Anti-Malaria Campaign to prevent the spread of the disease once the local patient is diagnosed to be infected with the parasite mentioned under 1.1. (10 marks)

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Q2

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Use only the space provided for answering

2. As a Medical Officer of Health (MOH), describe your **control programme** and **evaluation** in your area of the following situations

2.1. *Grama Niladhari* of Karapitiya, Galle has informed you that 5 out of 200 households of his administrative division had dengue haemorrhagic fever cases within the last week.

2.1.1. List three (03) indices important for programme evaluation

(06 marks)

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2.1.2. Describe how you would generate indices mentioned in 2.1.1.

(14 marks)

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2.1.3. Describe your control programme and post-evaluation

(30marks)

2.2. Sixteen (16) out of 800 residents in Balapitiya have been detected as having *Wuchereria bancrofti* microfilaraemia following a probe survey.

2.2.1. List four (04) indices important for programme evaluation.

(10 marks)



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2.2.2. Describe how you would produce indices mentioned in 2.2.1.

(20 marks)

2.2.3. Describe your control programme and post-evaluation

(20 marks)



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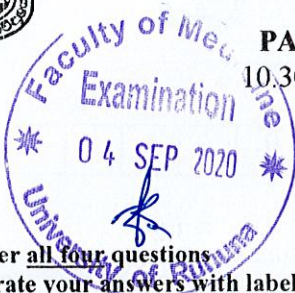
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Q3



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Answer all four questions
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3.1. A range of parasites causes eye infections.

3.1.1. List the parasites which can cause eye infections. (18 marks)
 (State one (01) organism for each parasitic stage)

Stage	Organism
Microfilariae	
Adult worms	
Filariform larvae	
Cysticercus larvae	
Bradyzoites	
Maggots	

3.1.2. Describe how microfilariae of the organism mentioned in 3.1.1 cause blindness. (12 marks)



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3.1.3. State commonly used drug treatment for each disease caused by organisms mentioned in 3.1.1.

(20 marks)

Stage	Drug treatment
Microfilariae	
Adult worms	
Filariform larvae	
Cysticercus larvae	
Bradyzoites	
Maggots	



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3.2. Parasitic diseases are being diagnosed using a range of diagnostic tests.

3.2.1. State one (01) disease which can be diagnosed by isolating following parasitic stages. **(18 marks)**

Stage	Disease
Microfilariae	
Cysts	
Filariform larvae	
Eggs	
Amastigotes	
Oocysts	

3.2.2. State diagnostic tests under each category of tests for diseases mentioned in 3.2.1. **(20 marks)**

Stage	Routine test	Higher sensitive test
Microfilariae		
Cysts		
Filariform larvae		
Eggs		
Amastigotes		
Oocysts		



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3.2.3. Describe the advantages of the higher sensitivity test for microfilariae mentioned 3.2.2. (12 marks)



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Answer all four questions

Illustrate your answers with labelled diagrams wherever necessary

Use only the space provided for answering

4.1. A 27-year-old school teacher from Hikkaduwa developed pain and redness over the left leg after severe inguinal lymphadenopathy on the same side. A palpable vessel was detected over the medial aspect of the left thigh. Circulatory filarial antigen (CFA) test was positive.

4.1.1. State the complete diagnosis.

(10 marks)

4.1.2. List the steps of the treatment for the diagnosis mentioned in 4.1.1.

(15 marks)

4.2. An 18-year-old boy from Tangalle complained of an acne-like lesion over the dorsal surface of the right hand over three months duration. Fine needle aspiration and cytology has revealed intracellular parasitic stages in monocytes.

4.2.1. State the diagnosis.

(05 marks)



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4.2.2. Draw a labelled diagram of the diagnostic stage of the disease mentioned in 4.2.1 (05 marks)

4.2.3. How would you treat this patient and prevent repeat infections? (15marks)

4.3. A 3-year-old child from Matara came to a paediatrics outpatient department with a history of passage of motile white worm segments. A recently collected creamy white fleshy worm segments were produced to the paediatrician.

4.3.1. State the diagnosis. (05 marks)



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4.3.2. How would you confirm your diagnosis mentioned in 4.3.1.

(15marks)

4.3.3. State the commonly used drug for the disease mentioned in 4.3.1.

(05 marks)

4.4. A 15-year-old child was bitten by a snake in the night while he was coming back after using the toilet situated a little far away from home closer to a scrub-jungle. Child has identified it as a *Python*. However, the child has developed ptosis and blindness after several hours of the snake bite.

4.4.1. What is the most probable snake to cause the bite mentioned in 4.4?

(05 marks)



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4.4.2. List the steps in the hospital management of the snake bite caused by the snake mentioned in 4.1.1.
(20 marks)