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POSTGRADUATE INSTITUTE OF MEDICINE  
UNIVERSITY OF COLOMBO

MD (MEDICAL PARASITOLOGY) EXAMINATION - JANUARY 2021

Date : 26<sup>th</sup> January 2021

Time : 9.00 a.m. - 12.00 noon

**PAPER I**

Answer **all five** (05) questions

Answer each question in a separate book

1. Discuss mechanisms of immunity in malaria and current status of vaccine development.  
(100 marks)
2. As part of a study to quantify the social and economic burden of lymphatic filariasis, the incidence, duration and severity of adenolymphangitis was investigated in a filarial endemic area. Discuss the aetiology, pathophysiology and management of filarial adenolymphangitis.  
(100 marks)
3. Sri Lanka has reported several zoonotic infections in the past and it stays high on the list of countries with zoonoses. Discuss the medical importance of zoonotic helminth infections in Sri Lanka.  
(100 marks)
4. You have been invited to draw up a plan for surveillance of intestinal protozoan infections in predisposed groups in Colombo Municipal area. Propose a detailed plan including selection of participants, instructions for sample collections and transport and setting up of laboratory diagnostic facilities.  
(100 marks)
5. Dengue has become a severe public health burden in several countries including Sri Lanka. Vector control is identified as the main strategy against dengue which needs a better understanding of vector bionomics. Write an account on bionomics of *Aedes aegypti* that makes it an effective vector.  
(100 marks)

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**MD (MEDICAL PARASITOLOGY) EXAMINATION - JANUARY 2021**

**Date :** 26<sup>th</sup> January 2021

**Time :** 1.00 p.m. - 4.00 p.m.

**PAPER II**

Answer **all five** (05) questions

Answer each question in a separate book

1. Several effective drugs are available for treating soil transmitted helminth (STH) infections. However, despite these drugs elimination of STH has not been achieved in many endemic countries.

- 1.1 List intestinal helminth infections that are prevalent in Sri Lanka  
(20 marks)
- 1.2 Discuss current approach for diagnosing intestinal helminth infections prevalent in Sri Lanka  
(20 marks)
- 1.3 How diagnosis of STH can be improved? Discuss scope of novel technologies which could be used/developed for rapid diagnosis of STH  
(40 marks)
- 1.4 Should we screen for subclinical STH infections? State your view with reasons  
(20 marks)

2. A repatriated worker from India underwent routine screening for malaria before being released from the quarantine center and was found to be positive for *P. vivax* malaria.

2.1 List the samples and tests used for screening for malaria in the above setting. (20 marks)

2.2 Discuss the epidemiological significance of the positive test result in relation to the current local situation of malaria. (50 marks)

2.3 Briefly describe the management of this patient. (30 marks)

3. A 26-year-old lady in her first trimester, presented to an antenatal clinic, with fever and cervical lymphadenopathy. She had no other medical conditions. This was her second pregnancy and her first child is 4 years old and healthy. She had started working as a cleaner at a pet shop 8 months ago. All the other antenatal tests were normal. The obstetrician suspects a parasitological cause.

3.1 What is the most likely parasitic aetiology? (05 marks)

3.2 What other information would you elicit during history taking? (10 marks)

3.3 How would you confirm the diagnosis? (20 marks)

3.4 List the possible outcomes due to this infection. (15 marks)

3.5 How would you manage this patient? (30 marks)

3.6 Briefly state the management of the baby after delivery. (20 marks)

4. Schistosomiasis transmission has been reported from 78 countries.

- 4.1 Name five (05) species that cause infection in humans giving one (01) geographical area of distribution for each species. (20 marks)
- 4.2 Name the drug of choice for treatment of schistosomiasis. (05 marks)
- 4.3 List two (02) groups targeted for treatment of schistosomiasis by control programs. (10 marks)
- 4.4 List the strategies used for the control of schistosomiasis by endemic countries (25 marks)
- 4.5 In some areas with lower transmission levels, elimination of schistosomiasis is considered a “winnable battle” by public health officials. Explain the problems encountered during control programs for schistosomiasis. (30 marks)
- 4.6 Name the species targeted by schistosomiasis candidate vaccines in human clinical trials (10 marks)

5. The integrated vector management (IVM) is one of the strategies adopted by World Health Organization (WHO) to promote better vector control.

- 5.1 Define the term Integrated vector control (10 marks)
- 5.2 What are the aims and goals of the IVM (20 marks)
- 5.3 Briefly describe the key elements necessary to achieve the aims and goals of IVM Program. (30 marks)
- 1.4 Identify the indicators that could be used to measure the impact of IVM on the aims you have mentioned in 5.2 outlining the strategies available to measure the indicators. (40 marks)