UNIVERSITY OF JAFFNA, SRI LANKA

FACULTY OF ALLIED HEALTH SCIENCES

THIRD YEAR FIRST SEMESTER EXAMINATION IN B.Sc. Hons (MLS) - 2023

MLSMP 3144 MEDICAL PARASITOLOGY

DATE: 25.11.2024 **TIME: 2 Hours**

ANSWER ALL FOUR QUESTIONS

1. Microscopic examination of thick and thin blood films is considered as the gold standard for the diagnosis of malaria.

   1.1. Highlight the purpose of preparing thick and thin blood films for malaria diagnosis. **(20 marks)**

   1.2. Briefly explain the steps involved in preparing thick and thin blood smears and the primary staining methods for the microscopic diagnosis of malarial parasites **(25 marks)**

   1.3. Discuss the key morphological features which will help you to differentiate *Plasmodium vivax* from *Plasmodium falciparum* under the microscope. **(40 marks)**

   1.4. Mention the other diagnostic options available for the diagnosis of malaria. **(15 marks)**

2. A 35-year-old male farmer from a rural area presents to the medical ward with complaints of lower abdominal pain, often crampy in nature, diarrhea approximately 5-6 times daily which is mixed with mucus and occasionally streaked with blood, tenesmus (frequent urge defecate) and general weakness lasting for the past 10 days. An intestinal protozoan parasitic infection was suspected.

   2.1. Name the most likely intestinal protozoan parasite responsible for the above condition. **(15 marks)**

   2.2. Briefly outline the life cycle of the parasites which you have mentioned in 2.1 and clearly indicate the infective and diagnostic stages. **(25 marks)**

   2.3. Describe the appropriate sample collection procedure to ensure accuracy and reliability of the results for the microscopic diagnosis of the above parasitic condition. **(25 marks)**

   2.4. Outline the laboratory techniques involved in the microscopic detection of the different stages of an intestinal protozoan parasite and indicate the unique characteristic features of each of the above stages which will help you to differentiate the species. **(35 marks)**

3.

3.1. Name the parasite responsible for the following parasitic condition in human.

3.1.1. Lymphatic filariasis **(05 marks)**

3.1.2. Trichomoniasis **(05 marks)**

3.1.3. Cutaneous Leishmaniasis **(05 marks)**

3.2. Indicate the infective and the diagnostic stage of each of the parasites which you have mentioned in 3.1 **(15 marks)**

3.3. Briefly outline the sampling technique and laboratory procedures for the microscopic demonstration of each diagnostic stage of the parasites mentioned in section 3.2. **(70 marks)**

4.

4.1. Name four (04) small intestinal nematode infections that can be diagnosed microscopic examination of stool samples in the laboratory. **(20 marks)**

4.2. Describe the laboratory procedure involved in the microscopic stool examination for the diagnosis of intestinal nematode infections. **(40marks)**

4.3. Write short notes on the following

4.3.1. Concentration techniques for the diagnosis of intestinal parasitic infections. **(20 marks)**

4.3.2. Laboratory diagnosis of *Enterobious vermicularis* infection in children. **(20 marks)**