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UNIVERSITY EXAMINATIONS 2021/2022

FIRST YEAR, THIRD SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATION FOR
BACHELOR OF SCIENCE IN NURSING

NND 3132: MEDICAL PARASITOLOGY

DATE: OCTOBER 2023

TIME: 3 HOURS

INSTRUCTIONS:

Ensure that all your answers are properly numbered

Part 1: Multiple Choice Questions (MCQs): Write the correct answer on the space provided in the answer booklet. Each MCQ is one mark.

Part 11: Short Answer Questions – Answer questions following each other on the answer booklet.

Part 111: Long Answer Questions – Answer the questions on the answer booklet

SECTION A: MULTIPLE CHOICE QUESTIONS (20 MARKS)

1. What is the name of larval form of *Taenia solium*
 - a) *Cysticercus cellulosae*
 - b) Cysticercoid
 - c) *Cysticercus bovis*
 - d) Hydatid cyst
2. River blindness is caused by?
 - a) Loa loa
 - b) *Mansonella perstans*
 - c) *Mansonella streptocerca*
 - d) *Onchocerca volvulus*
3. Which of the following is the longest tapeworm found in man

- a) *Diphyllobothrium latum*
 - b) *Taenia sagnata*
 - c) *Taenia solium*
 - d) *Echinococcus granulosus*
4. Which of the following is the second immediate host of *Diphyllobothrium latum*
- a) Cyclops
 - b) Man
 - c) Snail
 - d) Fresh water fish
5. All of the following lead to bloody diarrhea EXCEPT?
- a) *Schistosoma japonicum*
 - b) *Entamoeba histolytica*
 - c) *Schistosoma mansoni*
 - d) *Schistosoma hematobium*
6. Which of the following is characteristic of helminths that infect human beings?
- a) They usually do not multiply in the host
 - b) They rarely provoke an eosinophilia
 - c) They cause severe disease after infection with only a few parasites
 - d) They typically cause lifelong infections
7. The following cause malaria attacks (paroxysms)
- a) Release of toxins from RBC
 - b) Invasion of RBC by Merozoites
 - c) Severe hemolytic anemia
 - d) All of the above
8. There are indurations of the irregular margins of the spreading ulcer
- a) Amoebic granuloma
 - b) Amoeboma
 - c) Amoebiasis cutis
 - d) Amoebic colitis
9. Which statement is correct regarding Chagas' disease:
- a) It is caused by *Trypanosoma brucei* complex
 - b) Human acquires the disease via the bites of infected sandflies

- c) It causes megasyndrome in patients with prolonged illness
 - d) The most common clinical manifestation is Winterbottom's sign
10. Which plasmodium species has a preference for old RBCs
- a) Plasmodium falciparum
 - b) Plasmodium malariae
 - c) Plasmodium vivax
 - d) Plasmodium ovale
11. The following statements concerning *Ascaris lumbricoides* are correct except:
- a) *Ascaris lumbricoides* is one of the largest nematode
 - b) *Ascaris lumbricoides* can cause pneumonia
 - c) Both dogs and cats are intermediate hosts of *Ascaris lumbricoides*
 - d) *A. lumbricoides* is transmitted by ingestion of eggs
12. The following statements concerning kala-azar are correct except:
- a) Kala-azar is caused by *Leishmania donovani*
 - b) Kala-azar is transmitted by the bite of sandflies
 - c) Kala-azar occurs primarily in rural Latin America
 - d) Kala-azar can be diagnosed by finding amastigotes in bone marrow
13. The following statements concerning hookworm infection are correct except:
- a) Hookworm infection can cause pneumonia
 - b) Hookworm infection is acquired by humans when filariform larvae penetrate the skin
 - c) Hookworm infection is caused by *Necator americanus*
 - d) Hookworm infection can be diagnosed by finding the trophozoite in the stool
14. The following statements concerning *Trichomonas vaginalis* are correct except:
- a) *T. vaginalis* is transmitted sexually
 - b) *T. vaginalis* can be diagnosed by visualizing the trophozoite
 - c) *T. vaginalis* can be treated effectively with metronidazole
 - d) *T. vaginalis* causes bloody diarrhea
15. The following statements concerning *Giardia lamblia* are correct except:
- a) *G. lamblia* has both a trophozoite and cyst stage in its life cycle
 - b) *G. lamblia* is transmitted by the fecal-oral route from both human and animal sources

- c) *G. lamblia* causes hemolytic anemia
 - d) *G. lamblia* can be diagnosed by the string test
16. The following statements concerning malaria are correct except
- a) The female anopheles mosquito is the vector
 - b) Early infection, sporozoites enter hepatocytes
 - c) Release of merozoites from red blood cells causes fever and chills
 - d) The principal site of gametocyte formation is the human gastrointestinal tract
17. The following parasites are transmitted by mosquitos except:
- a) *Leishmania donovani*
 - b) *Wuchereria bancrofti*
 - c) *Plasmodium vivax*
 - d) *Plasmodium falciparum*
18. Pigs or dogs are the sources of human infection for each of the following parasites except:
- a) *Echinococcus granulosus*
 - b) *Taenia solium*
 - c) *Ascaris lumbricoides*
 - d) *Trichimella spiralis*
19. In malaria, the form of plasmodia transmitted from mosquito to human is the
- a) Sporozoite
 - b) Gametocyte
 - c) Merozoite
 - d) Hypnozoite
20. Which of the following agent is used to prevent malaria
- a) Mebendazole
 - b) Chloroquine
 - c) Inactivated vaccine
 - d) Zinc table

SECTION B: SHORT ANSWER QUESTIONS (40 MARKS)

1. Describe the pathogenesis of *Trichomonas vaginalis* (5 marks)
2. Outline the life cycle of *Hymenolepis nana* (5 marks)
3. Explain the different types of parasites (6 marks)

4. Describe the pathogenesis of *Ascaris lumbricoides* (5 marks)
5. Describe the modes of infection and clinical presentation of *Enterobius vermicularis* (6 marks)
6. Describe the pathogenesis of *Trichuris trichiura* (5 marks)
7. Describe the pathogenesis of bancroftian elephantiasis (8 marks)

SECTION C: LONG ANSWER QUESTIONS (40 MARKS)

QUESTION ONE

A 34-year-old man visited Kiambu Level V Hospital presenting with mucoid diarrhea, abdominal pain, fever, cough, urticarial, and hepatosplenomegaly. The stool microscopy results showed a rhabditiform larva.

- a) Indicate the most likely parasitic infection he was suffering from (1 mark)
- b) Describe the life cycle of the parasite while highlighting its pathogenesis (16 marks)
- c) Outline its prevention measures (3 marks)

QUESTION TWO

A client is diagnosed with trapanosomiasis

- a) Outline the species responsible for African trypanosomiasis (2 marks)
- b) Distinguish between the clinical manifestations of the above-mentioned species (11 marks)
- c) Describe the life cycle of African trypanosomiasis (4 marks)
- d) Outline the prevention strategies for African trypanosomiasis (3 marks)