



UNIVERSITI KUALA LUMPUR  
INSTITUTE OF MEDICAL SCIENCE TECHNOLOGY

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FINAL EXAMINATION  
OCTOBER 2025 SEMESTER

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COURSE CODE : HDB20903  
COURSE TITLE : MEDICAL PARASITOLOGY AND ENTOMOLOGY  
PROGRAMME NAME : BACHELOR OF BIOMEDICAL SCIENCE (HONOURS)  
DATE : 31 JANUARY 2026  
TIME : 9:00AM - 12:00PM  
DURATION : 3 HOURS



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INSTRUCTIONS TO CANDIDATES

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1. Please read the instructions given in the question paper CAREFULLY.
2. This question paper is printed on both sides of the paper.
3. This question paper consist of TWO sections.
4. Answer ALL questions for Section A.
5. Section B consist of four questions. Answer THREE (3) questions only.
6. Please write your answer on the answer booklet provided.
7. Please answer all questions in English only.
8. Please answer MCQ/EMQ questions using OMR sheet.  *Tick if applicable*
9. Refer to the attached Formula/ Appendies.  *Tick if applicable*

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THERE ARE 15 PAGES OF QUESTIONS INCLUDING THIS PAGE

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## SECTION A (Total: 40 marks)

Answer ALL questions.

Please use the answer booklet provided.

1. Which of the following is a protozoan parasite?
  - A. *Taenia solium*
  - B. *Ascaris lumbricoides*
  - C. *Enterobius vermicularis*
  - D. *Plasmodium falciparum*
  
2. Which one of these is an ectoparasite?
  - A. Bees
  - B. Fleas
  - C. Butterflies
  - D. Dogs
  
3. It is found throughout Southeast Asia and is the most common cause of simian malaria in Malaysia. This statement best describes \_\_\_\_\_.
  - A. *Plasmodium falciparum*
  - B. *Plasmodium berghei*
  - C. *Plasmodium knowlesi*
  - D. *Plasmodium vivax*

4. Which of the following protozoan parasite can be spread to humans by the bite of a sandfly?
- A. *Trichomonas vaginalis*
  - B. *Entamoeba histolytica*
  - C. *Plasmodium falciparum*
  - D. *Leishmania donovani*
5. Which of the following techniques is the best to quantify helminth eggs?
- A. McMaster technique
  - B. Sedimentation technique
  - C. Direct smear technique
  - D. Stoll's technique
6. Entero-Test or known as String test is a simple and convenient method of sampling duodenal contents. Which of the following parasites most likely to be found via Entero-Test method?
- A. Larvae of *Trichuris trichiura*
  - B. Fertilized egg of *Ascaris* spp.
  - C. *Giardia lamblia* trophozoites
  - D. Hookworms trophozoites
7. Which of the following stool preservatives is the BEST for permanent stain and long-term preservation?
- A. Merthiolate iodine formaldehyde
  - B. Sodium acetate-acetic acid-formalin
  - C. Polyvinyl alcohol
  - D. Formalin solution

8. Which one of the following methods is the BEST to collect *Enterobius vermicularis* samples in children?
- A. Scotch tape method
  - B. Faecal sampling
  - C. Anal swab
  - D. Urine sampling
9. *A retractable, conelike structure that is located on the anterior end of the scolex, and in some species is armed with hooks.*  
Which of the following part of the cestodes indicated in the statement above?
- A. Rostellum
  - B. Sucker
  - C. Bothria
  - D. Acetabulum
10. What is the unique feature of strongyloidiasis?
- A. Difficult to detect and can be underestimated.
  - B. Require several intermediate hosts to complete the life cycle.
  - C. The ability of the parasite to autoinfect the host.
  - D. It is preventable by eating cooked meat.
11. Which of the following is the most common animal that actively shed *Toxoplasma gondii* oocysts?
- A. Squirrel
  - B. Monkey
  - C. Cat
  - D. Dog

12. The ectoparasite is commonly found in Malaysia. They have a hard shell, bury their mouthparts into human skin and suck their blood. This statement best describes \_\_\_\_\_.
- A. Ticks (*Ixodidae*)
  - B. Ticks (*Argasidae*)
  - C. Fleas (*Xenopsylla* spp)
  - D. Lice (*Hoplopleura* spp)
13. Blood-sucking insects are able to transmit \_\_\_\_\_ to human.
- A. *Strongyloides stercoralis*
  - B. *Wuchereria bancrofti*
  - C. *Ascaris lumbricoides*
  - D. *Ancylostoma duodenale*
14. Which of the following nematodes does not pass through lungs during their life cycle?
- A. *Ascaris lumbricoides*
  - B. *Trichuris trichiura*
  - C. *Strongyloides stercoralis*
  - D. *Wuchereria bancrofti*
15. Which of the following parasites is transmitted by dogs?
- A. *Diphyllobothrium latum*
  - B. *Echinococcus granulosus*
  - C. *Balantidium coli*
  - D. *Taenia solium*

16. Red blood cells are seen in the endoplasm of trophozoites of \_\_\_\_\_.
- A. *Naegleria fowleri*
  - B. *Giardia lamblia*
  - C. *Entamoeba histolytica*
  - D. *Entamoeba coli*
17. Sandfly is the vector for \_\_\_\_\_.
- A. *Leishmania donovani*
  - B. *Plasmodium falciparum*
  - C. *Brugia malayi*
  - D. *Wuchereria bancrofti*
18. The characteristics of these parasites include leaf-like shaped, unsegmented flat worms and two different hosts in their life cycle. What is the class for this parasite?
- A. Cestoda
  - B. Protozoa
  - C. Trematoda
  - D. Nematoda
19. Miracidium larval form is seen in \_\_\_\_\_.
- A. trematodes
  - B. cestodes
  - C. nematodes
  - D. sporozoa

20. The term for a product used to eliminate endoparasites is \_\_\_\_\_.
- A. vaccination
  - B. antibiotic
  - C. anthelmintic
  - D. fomite
21. \_\_\_\_\_ is an example of antiprotozoal drug.
- A. Miconazole
  - B. Trimethoprim
  - C. Metronidazole
  - D. Bacitracin
22. Which of the following arthropods have both male and females biting characteristics to spread the parasitic diseases?
- A. Mango flies
  - B. Sandflies
  - C. Tsetse flies
  - D. Black flies
23. What is the best way to prevent lymphatic filariasis?
- A. Avoid mosquito bites
  - B. Refrain from swimming
  - C. Frequent handwashing
  - D. Avoid eating the under cooked meat

24. \_\_\_\_\_ is the active form of *Giardia lamblia*.
- A. Sporocysts
  - B. Cercaria
  - C. Cysts
  - D. Trophozoite
25. \_\_\_\_\_ is the BEST drug of choice for treating *Taenia solium* infection.
- A. Clotrimazole
  - B. Praziquantel
  - C. Metronidazole
  - D. Ancylovir
26. A 20-year-old patient with recent history of swimming developed severe headache, vomiting, and ended in coma. The CSF examination revealed motile amoeba. Which of the following amoebas is the MOST likely causal agent?
- A. *Acanthamoeba culbertsoni*
  - B. *Iodamoeba butschlii*
  - C. *Naegleria fowleri*
  - D. *Entamoeba histolytica*
27. The MOST common site of infection in men by *Trichomonas vaginalis* is \_\_\_\_\_.
- A. seminal vesicle
  - B. urethra
  - C. prostate
  - D. bladder

28. Cutaneous larva migrans is the name given to migrating larva of \_\_\_\_\_.
- A. *Trichuris trichiura*
  - B. *Ascaris lumbricoides*
  - C. *Enterobius vermicularis*
  - D. Hookworms
29. The artificial materials present in stool sample that are not parasites and could mislead the laboratory result is called \_\_\_\_\_.
- A. artifacts
  - B. diatoms
  - C. water molecules
  - D. crystal
30. \_\_\_\_\_ eggs are found in sputum samples.
- A. *Ancylostoma duodenale* and *Necator americanus*
  - B. *Ascaris lumbricoides*
  - C. *Paragonimus westermani*
  - D. *Enterobius vermicularis*
31. Serological tests such as Indirect-Hemagglutination (IHA) and Indirect-Fluorescent Antibody (IFA) are commonly used to diagnose \_\_\_\_\_.
- A. *Blastocystis hominis*
  - B. *Entamoeba histolytica*
  - C. *Giardia lamblia*
  - D. *Balantidium coli*

32. MacMaster technique is used for helminthes \_\_\_\_\_ .
- A. concentration
  - B. quantification
  - C. classification
  - D. detection
33. Which of the following parasitic eggs are excreted in urine?
- A. *Schistosoma sinensis*
  - B. *Schistosoma haematobium*
  - C. *Schistosoma japonicum*
  - D. *Schistosoma mansoni*
34. An AIDS patient is admitted due to severe diarrhea. Laboratory examination using fluorescent dye indicated spores like parasites in stool, urine and nasopharyngeal swabs. Which of the following best describes the patient's infection?
- A. *Balantidium coli*
  - B. *Cryptosporidium parvum*
  - C. *Isospora belli*
  - D. Microsporidia
35. Parasites that have a joined, chitinous exoskeleton with segmented bodies and joined appendages would be classified as \_\_\_\_\_ .
- A. helminths
  - B. protist
  - C. cestodes
  - D. arthropods

36. Protozoa belongs to the kingdom of \_\_\_\_\_.
- A. Plantae
  - B. Protista
  - C. Monera
  - D. Animalia
37. \_\_\_\_\_ is transmitted by cats.
- A. *Toxoplasma gondii*
  - B. *Toxocara canis*
  - C. *Echinococcus granulosus*
  - D. *Balantidium coli*
38. A patient presents with symptoms of abdominal pain, diarrhea, and weight loss. Stool examination reveals eggs with a characteristic "barrel-shaped" appearance. Which parasite is most likely responsible?
- A. *Trichuris trichiura*
  - B. Hookworm
  - C. *Ascaris lumbricoides*
  - D. *Enterobius vermicularis*
39. A traveler returns from Africa with symptoms of fever, chills, and jaundice. Blood smear examination reveals the presence of a Plasmodium species with a characteristic "banana-shaped" gametocyte. Which species is most likely responsible?
- A. *Plasmodium knowlesi*
  - B. *Plasmodium vivax*
  - C. *Plasmodium falciparum*
  - D. *Plasmodium ovale*

40. A patient presents with symptoms of fever, headache, and a characteristic "chancere" lesion on the skin. The patient has a history of travel to South America. Which parasite is most likely responsible?

- A. *Leishmania donovani*
- B. *Plasmodium vivax*
- C. *Trypanosoma cruzi*
- D. *Toxoplasma gondii*

SECTION B (Total: 60 marks)

Answer THREE (3) questions only.

Please use the answer booklet provided.

Question 1

A 25-year-old man comes to the clinic with complaints of diarrhea, abdominal cramps, and fatigue for the past 2 weeks. He recently returned from a trip where he drank untreated water. The physician suspects a parasitic infection.

- i. Suggest the types of laboratory samples that should be collected for diagnosis.

(6 marks)

- ii. Write down the stool concentration technique protocol for Formalin Ethyl Acecate

(14 marks)

**Question 2**

A 30-year-old male agricultural worker from a rural area presents with weakness, pallor and abdominal pain. He gives a history of working barefoot in the fields. On examination, he is found to have severe iron-deficiency anemia.

- i. What is the most likely diagnosis?  
(4 marks)
  
- ii. Identify the two parasitic worms that commonly cause this infection in humans.  
(4 marks)
  
- iii. Describe the mode of the parasite transmission and epidemiology of infection.  
(12 marks)

**Question 3**

A 32-year-old woman presents with fever, tender lymph nodes, and limb swelling during nighttime hours. A midnight blood smear reveals sheathed microfilariae with no nuclei in the tip of the tail.

- i. Identify the disease.  
(2 marks)
  
- ii. Give the definition and causative agent for the disease.  
(6 marks)
  
- iii. Describe the life cycle of the parasite without a diagram.  
(12 marks)

**Question 4**

A 28-year-old woman visits the clinic complaining of vaginal itching, foul-smelling discharge, and discomfort during urination. She reports having multiple sexual partners. The physician suspects trichomoniasis.

- i. Name the causative parasite for this disease.  
(2 marks)
  
- ii. Describe the key characteristics of this parasite.  
(10 marks)
  
- iii. List down four prevention methods for this disease.  
(8 marks)

END OF EXAMINATION PAPER



