



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING AND MIDWIFERY SCIENCES
BACHELOR OF SCIENCE IN NURSING (BSN)
September-December 2024 TRIMESTER MAIN EXAMINATION**

COURSE CODE AND TITLE: BSN 125- Parasitology/Virology

DATE

TIME: 2 HOURS

START: 9:00AM

END: 11:00AM

Instructions

- 1) This exam is out of 50
- 2) This paper has three sections: Section I: Multiple choice Questions (MCQ) (20 marks),
Section II: Short answer questions (SAQ) (30 marks)
- 3) Answer **ALL** questions in Section I and Section II and III
- 4) Answer all the questions in the examination booklets provided
- 5) Any rough work to be done at the back of the answer booklet

SECTION I: MULTIPLE CHOICE QUESTIONS (MCQs)

(20 MARKS):

1. Poxviruses replicate in;-
 - A. Cytoplasm
 - B. Nucleus
 - C. Endoplasmic reticulum
 - D. Endosomes
2. The commonest cause of death in children with measles is;-
 - A. Rash
 - B. High fever
 - C. Koplik spots
 - D. Bronchopneumonia
3. The primary advantage of mRNA vaccines over traditional vaccines is;-
 - A. They do not require a cold chain for storage.
 - B. They can be administered orally instead of by injection.
 - C. They can be developed and produced more rapidly.
 - D. They contain adjuvants to enhance the immune response.
4. The purpose of adjuvants in vaccines is;-
 - A. To inactivate the virus or bacteria
 - B. To enhance the body's immune response to the antigen
 - C. To act as preservatives for the vaccine
 - D. To stabilize the genetic material in mRNA vaccines
5. The infective stage of *Trichomonas vaginalis* is the
 - A. Trophozoite
 - B. Cyst
 - C. Metacyclic trypomastigote
 - D. Metacyclic promastigote
6. Visceral larva migrans is caused by the following parasite:
 - A. *Ascaris lumbricoides*
 - B. *Toxocara canis*
 - C. *Ancylostoma braziliense*
 - D. *Necator americanus*
7. The infections associated with dysentery and cramps is;-
 - A. *Entamoeba histolytica*
 - B. *Entamoeba coli*
 - C. *Giardia lamblia*
 - D. *Cryptosporidium hominis*
8. An ultrasound done on a 30-year-old woman at 32 weeks of gestation found that the fetus had hydrocephaly. This clinical manifestation is thought to be due to an infection acquired during her current pregnancy. The parasite which causing this congenital anomaly is:
 - A. *Enterocytozoon*
 - B. *Naegleria fowleri*
 - C. *Toxoplasma gondii*
 - D. *Plasmodium falciparum*
9. A 22-yearold female patient presents to your facility with irregular fever with chills and rigors, abdominal discomfort with hepatosplenomegaly. These clinical manifestations are suspected to be due to an infection acquired via insect bite. The likely organism to cause these clinical manifestations is:
 - A. *Wuchereria bancrofti*

- B. *Plasmodium falciparum*
 C. *Leishmania donovani*
 D. *Toxoplasma gondii*
10. The following is not a zoonotic parasite;-
 A. *Balantidium coli*
 B. *Trypanosoma cruzi*
 C. *Ascaris lumbricoides*
 D. *Trichostrongylus colubriformis*
11. The clinical presentation in urogenital schistosomiasis include all of the following classical signs except
 A. Hematuria
 B. Fibrosis of the bladder and ureter
 C. Vaginal bleeding, pain during sexual intercourse, and nodules in the vulva in women
 D. Abdominal pain, diarrhea, and blood in the stool
12. Lesions on the cervix are likely due to infection with the following parasite
 A. *Trichomonas vaginalis*
 B. *Schistosoma haematobium*
 C. *Schistosoma mansoni*
 D. *Entamoeba histolytica* causing extraintestinal amoebiasis
13. Pruritis ani is associated with the following parasitic infection:
 A. *Strongyloides stercoralis*
 B. *Toxocara cati*
 C. *Enterobius vermicularis*
 D. *Trichuris trichura*
14. The following drug is recommended for the treatment of *Onchocerca volvulus*:
 A. Ivermectin
 B. Thiabendazole
 C. Albendazole
 D. Diethylcarbamazine (DEC)
15. *Dracunculus medinensis* is transmitted by ingestion of infected:
 A. Midges
 B. Chrysops
 C. Cyclops
 D. Copepods
16. The following best describes the clinical manifestations associated with *Trypanosoma rhodesiense* infections;-
 A. Periodic febrile paroxysms progressing to neurological symptoms over the ensuing months to years
 B. Many asymptomatic patients
 C. An initial infection, rapidly progressing from an acute blood stage infection to the CNS in weeks to months
 D. An initial acute infection followed by decades of latency before exhibiting symptoms of the chronic disease
17. The parasites with hypnozoite stages is;-
 A. *Plasmodium falciparum* and *Plasmodium ovale*
 B. *Plasmodium ovale* and *Plasmodium malariae*
 C. *Plasmodium ovale* and *Plasmodium vivax*

- D. *Plasmodium vivax* and *Plasmodium malariae*
18. Megaloblastic anemia is a typical feature of infection with the following parasite:
- A. *Plasmodium falciparum*
 - B. *Ancylostoma duodenale*
 - C. *Schistosoma mansoni*
 - D. *Diphyllobothrium latum*
19. Select the parasite of the following that is associated with microcephaly:-
- A. *Plasmodium falciparum*
 - B. *Toxoplasma gondii*
 - C. *Schistosoma japonicum*
 - D. Zika
20. The clinical presentation *Loa loa* infection is:-
- A. Hanging groin
 - B. Blindness
 - C. Calabar swelling
 - D. Lizard skin appearance

SECTION II: SHORT ANSWER QUESTIONS (SAQ) 30 MARKS

1. Describe viral latency and three (3) clinical presentation associated with Hepatitis B virus disease (5 marks)
2. Outline five (5) viruses associated with Hemorrhagic Fever (5 marks)
3. For each of the parasites listed below, indicate the infective stage and mention the drug recommended for treatment (5 marks)
 - a) *Leishmania donovani*
 - b) *Trypanosoma brucei gambiense*
 - c) *Toxoplasma gondii*
 - d) *Schistosoma mansoni*
 - e) *Wuchereria bancrofti*
4. State five (5) complications of *Plasmodium falciparum* infection (5 marks)
5. Briefly describe the life cycle of *Taenia solium* (5 marks)
6. Outline five (5) the clinical features of *Trichomonas vaginalis* infection (5 marks)