



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(MLT)-2019/B.Sc.(MLT)-2020/B.Sc.(MLT)-2021

Course Name – Medical Parasitology & Entomology

Course Code - BMLT501

(Semester V)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Select the primary mode of transmission of malaria to humans
 - a) Inhalation of infected air
 - b) Ingestion of contaminated water
 - c) Mosquito bites
 - d) Direct person-to-person contact
- (ii) Choose the correct term for the medical condition resulting from a parasitic infection by the protozoan parasite *Trypanosoma cruzi*
 - a) Chagas disease
 - b) Leishmaniasis
 - c) Malaria
 - d) Schistosomiasis
- (iii) Name the parasite that causes space-occupying lesions in liver:
 - a) *Entamoeba histolytica*
 - b) *Toxoplasma gondii*
 - c) *Plasmodium falciparum*
 - d) *Leishmania major*
- (iv) Select the part of the digestive system is primarily affected by *Giardia* infection
 - a) Stomach
 - b) Liver
 - c) Small intestine
 - d) Colon
- (v) Select the option indicating the primary mode of prevention for giardiasis during outdoor activities
 - a) Antibiotic treatment
 - b) Avoiding contaminated water sources
 - c) Insect repellent
 - d) Handwashing
- (vi) Select the correct definition of parasite from the following options:
 - a) A micro-organism that invades host cells and replicates inside them
 - b) An organism that lives in or on another living body to benefit the host
 - c) An organism that lives in or on another living body to benefit itself
 - d) An organism that lives in or on another living body without any benefit
- (vii) Choose the primary symptom of Amoebiasis

- a) Headache and cold
c) Fever
- b) Dysentery
d) Severe cold
- (viii) Identify the causative agent of Malaria
- a) Entamoeba Histolytica
c) Clostridium
- b) Leishmania
d) Plasmodium
- (ix) Select the incorrect statement regarding malaria:
- a) The female anopheles mosquito is the vector
c) Release of merozoites from red blood cells causes fever and chills
- b) Early infection, sporozoites enter hepatocytes
d) The principal site of gametocyte formation is the human gastrointestinal tract.
- (x) Select which of the following parasites does not have Pigs/Dogs as their reservoir host
- a) Echinococcus granulosus
c) Ascaris lumbricoides
- b) Taenia solium
d) Trichinella spiralis
- (xi) Choose the correct statement with respect to Brugia malayi:
- a) It causes lymphatic filariasis
c) Its microfilaria has two terminal nuclei
- b) Its infection is transmitted by the black flies
d) Microfilaria is the infective stage to human
- (xii) Select the correct statement with respect to parasitic infections in the respiratory system:
- a) Tropical pulmonary eosinophilia is caused by strongyloidiasis
c) Paragonimiasis causes haemoptysis
- b) Ascariasis causes Loeffler's syndrome
d) Pulmonary amoebiasis is an extension of amoebic liver abscess
- (xiii) Choose a clinical feature of African trypanosomiasis among the following:
- a) Winterbottom's sign
c) Chancre
- b) Chagoma
d) Onchocercoma
- (xiv) Choose the tapeworm having human as the definitive host
- a) Taenia solium
c) Hymenolepis nana
- b) Spirometra spp.
d) Echinococcus granulosus
- (xv) Select the one that is true with respect to cerebral malaria:
- a) It is a complication of Plasmodium vivax infection
c) All stages of the infected red blood cells develop knobs on their surface
- b) It is fatal if not treated
d) Cerebrospinal fluid findings are abnormal in most cases of cerebral malaria

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Compare between amoebiasis and giardiasis based on clinical signs and symptoms (3)
3. Explain the signs and symptoms to identify the progression of Leishmaniasis (3)
4. Explain the life cycle of Giardia lamblia schematically (3)
5. Compare between Bradyzoites & Tachyzoites of Toxoplasma gondii (3)
6. Illustrate the procedure of preparation of thick blood smear of a patient who is suspected to be affected by malaria (3)

OR

Illustrate the procedure of saline preparation for stool examination and explain its role in the diagnosis of amoebic infection (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe the life cycle of *Ascaris lumbricoides* (5)
8. Describe the life cycle of *Leishmania donovani* with reference to Kala Azar in humans (5)
9. Analyze the critical factors that influence the choice of collection method for various clinical samples in disease diagnosis. (5)
10. Evaluate the importance of quality control measures in the processing of clinical samples for disease diagnosis. (5)
11. Analyze the clinical manifestations of lymphatic filariasis in humans, and explain how these symptoms are related to the underlying pathophysiology. (5)
12. Analyze the advantages of Real-Time PCR over conventional PCR techniques in the context of disease diagnosis. (5)

OR

Analyze the role of the Malaria parasite dual antigen detection test in malaria control and elimination programs and explain how does this diagnostic tool contribute to disease surveillance and intervention strategies (5)
