

**CHUKA UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2020/2021**  
**SECOND SEMESTER EXAMINATION**  
**BMET 231: MEDICAL PROTOZOLOGY**

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**INSTRUCTIONS:** Answer question *one* and *any other two* questions

**Questions**

**Question 1 (Compulsory) (30 marks)**

- a) A football player returning from Sudan was admitted to the intensive care unit of hospital with fever and coma. Blood picture revealed severe anaemia. The white cells and platelets counts were normal. The serum bilirubin level was elevated. The CSF revealed no parasite while the blood film revealed the causative organism.
- (i) Indicate the diagnosis (1 Mark)
  - (ii) Explain what blood film revealed (3 Marks)
  - (iii) Explain the pathogenesis of coma in this condition (4 Marks)
  - (iv) Mention 1 drug that could be used for treatment of the case (1 Mark)
  - (v) Mention 1 drug that could be given for prophylaxis (1 mark)
- b) Explain the pathogenesis of amoebic liver abscess. (4 Marks)
- c) Compare and contrast *Giardia lamblia* and *Trichomonas vaginalis* as regards to: habitat, infective stage and mode of infection. (6 Marks)
- d) Highlight the clinical features of Kala-Azar (5 Marks)
- e) Using a flow chart, explain the life cycle *Balantidium coli*. (5 Marks)

**Question 2 (20 marks)**

- a) Explain the life cycle of *Toxoplasma gondii* infection. (10 marks)
- b) Describe any 5 methods used in the diagnosis of *African trypanosomiasis* caused by *Trypanosoma brucei rhodesiense* (10 marks)

**Question 3 (20 marks)**

- a) Discuss the pathogenicity of *Leishmania donovani* (10 marks)
- b) Describe the pathogenesis and clinical symptoms of the intestinal disease caused by *Entamoeba histolytica*. (10 Marks)

**Question 4 (20 marks)**

- a) *Naegleria fowleri* is a free-living amoebae that can cause disease in man:
- (i) Describe briefly the disease it causes in man. (2 Marks)
  - (ii) Explain the morphology of the 3 forms of this organism. (8 Marks)
- b) Describe life cycle and pathogenicity of *Cryptosporidium parvum* infection. (10 marks)