



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI ABUJA**  
**FACULTY OF SCIENCE**  
**Department of Pure and Applied Sciences**  
**SEPTEMBER, 2020\_1 EXAMINATION**

**COURSE CODE: BIO 310**

**COURSE TITLE: PROTOZOOLOGY**

**CREDIT: 2 UNITS**

**TIME ALLOWED: 2 HOURS**

**INSTRUCTION: ANSWER QUESTIONS 1 AND ANY OTHER THREE.**

- (1) a. Outline the General Characteristics of Apicomplexa. **(3 marks)**  
b. Enumerate the various mode of movement of protozoans giving examples. **(10 marks)**  
c. What do you understand by trophozoite and sporozoite. **(2 marks)**  
d. Summarize the special features in the life cycle of *Plasmodium falciparum*. **(10 marks)**
- 2a. Outline at least five characteristics of Leishmania. **(5 marks)**  
b). Differentiate between Hypopylaria and Peripyalaria in Leishmania. **(6 marks)**  
c). Outlines the pathological effects of Chagas disease **(4 marks)**
- 3a. Highlight the four plasmodium species responsible for human malaria. **(4 marks)**  
b). Discuss the life cycle of Plasmodium parasite. **(11marks)**
- 4a. illustrate diagrammatically, various stages of the three common species of plasmodium infecting man. **(6 marks)**  
b). Write consiely on the vectors of human malaria. **(9 marks)**
- 5a. Write short notes on the following:  
i). Symptoms of Toxoplasma. **(10 marks)**  
ii). Morphology of Toxoplasma. **(2 marks)**  
iii). Diagnosis of *Giardia* **(3marks)**