



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI ABUJA**  
**FACULTY OF SCIENCE**  
**Department of Pure and Applied Sciences**  
**JANUARY, 2021 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. Define the following:

i. A host

ii. Definitive host

iii. Intermediate host

iv. Reservoir host

v. Vector

**(5marks)**

b). Outline five characteristics of Leishmania parasite.

**(3 marks)**

c). Highlight any three (3) clinical diagnosis of Chagas disease

**(3 marks)**

d). Briefly explain the Epidemiology of *Trypanosomes*.

**(4 marks)**

e). Write concisely on the Diagnosis of Giardia

**(4 marks)**

f). Differentiate the two distinctive subcellular organelles of Apicomplexa parasites

**(6marks)**

2). Write short note of the following:

i). Diagnosis of Leishmania parasite

**(3marks)**

ii). Pathology of Leishmania parasite

**(3marks)**

iii). Treatment and Control of Leishmania parasite

**(4marks)**

iv). Morphology of Plasmodium parasite

**(5marks)**

3) a. Highlight the symptoms of Babesia.

**(4marks)**

b). Explain briefly the Isospora *belli*

**(5marks)**

c). Discuss the pathology and immunology to *Trypanosomes*

**(6 marks)**

(4). Write briefly on the following:

i). Pathology and Immunology of Malaria

**(6marks)**

ii). Treatment and control of Malaria

**(4marks)**

iii). Life cycle of *Entamoeba histolytica*.

**(5marks)**

5a). Highlight the clinical symptoms of the African trypanosomiasis?

**(6 marks)**

b). States the three symptoms of Leishmania.

**(3 marks)**

c). Outline the replication process in apicomplexan parasites

**(6 marks)**