

**UNIVERSITY OF SWAZILAND**

**MAIN EXAMINATION PAPER 2020/21**

**TITLE OF PAPER** : PARASITOLOGY

**COURSE CODE** : BIO446

**TIME ALLOWED** : THREE HOURS

**INSTRUCTIONS** :

1. THIS PAPER HAS TWO SECTIONS, A AND B
2. SECTION A IS COMPULSORY (ANSWER ALL QUESTIONS IN THIS SECTION)
3. ANSWER TWO (2) QUESTION FROM SECTION B
4. WHEREVER POSSIBLE ILLUSTRATE YOUR ANSWERS WITH LARGE CLEARLY LABELLED DIAGRAMS

**SPECIAL REQUIREMENTS:** NONE

**THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATORS**

SECTION A (Compulsory)

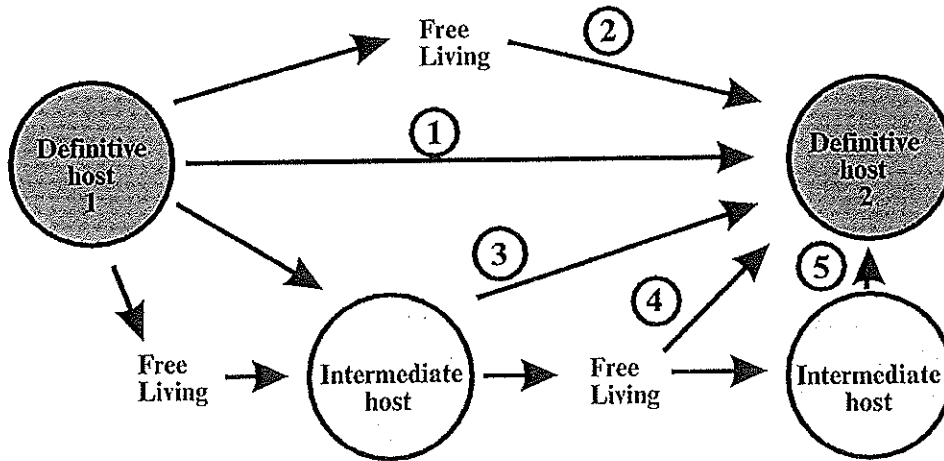
QUESTION 1

a. Parasites can shape community structure through their effects on ecosystems. Discuss this statement, with examples, on the ecological importance of parasites in relation to: trophic interactions, competition, biodiversity and keystone species.  
(15)

b. Copy the table below and fill in the table for *any five* of the parasitic diseases listed: (20)

Disease	Parasite	Signs & Symptoms (1)	Vector (if present)	Diagnostic test (1)
i. Babesiosis				
ii. Trypanosomiasis				
iii. Leishmaniasis				
iv. Malaria				
v. Toxoplasmosis				
vi. Schistosomiasis				
vii. Filariasis				

c. Identify the transmission routes below and give an example of a parasite plus vector (where applicable) for each route. (15)



[Total = 50 marks]

**SECTION B**

Answer any TWO (2) questions from this section.

**QUESTION 2**

Differentiate between

- i. human and animals hosts as sources of infection
- ii. disease state and carrier state
- iii. prevalence and epidemiology
- iv. symptoms and signs

[Total = 25 marks]

**QUESTION 3**

Briefly explain importance *any two* of following with regard to parasite encountered in patients:

- i. Morphology
- ii. Geographic distribution
- iii. Parasite's life-cycle

[Total = 25 marks]

**QUESTION 4**

The parasites *Ancylostoma duodenale*, *Plasmodium* spp. and *Schistosoma mansoni* cause diseases referred to as the "world's greatest scourges". Outline the life cycle of each parasite, the disease it causes and methods of control.

[Total = 25 marks]

**QUESTION 5**

Write an essay on specific and non-specific responses by hosts to parasitic infections and how parasites evade their host's immune responses.

[Total = 25 marks]