



FACULTY OF SCIENCE

DEPARTMENT OF ZOOLOGY

MODULE: **ZOO2A01**
 (GENERAL PARASITOLOGY)

CAMPUS: **APK**

EXAM **Final Exam – June 2016**

DATE: 30 May 2016

TIME: 12:30

ASSESSOR:

Dr L. Neethling

MODERATOR:

Dr L. Mokae

DURATION: 2 Hours

Total Marks: 100

NUMBER OF PAGES: 3 Pages (Including this page)

INSTRUCTIONS: Answer all the questions.
 Indicate the correct question number for your answers.

QUESTION 1

In regions where *Leishmania donovani* is prevalent, parents often crush sand flies into small wounds on their children to help them develop immunity against infections by this parasite. With the aid of a diagram, justify this statement by explaining the physiological process how increased immunity is gained through this process.

(15 marks)

QUESTION 2

Describe the life cycle of *Plasmodium falciparum* with the aid of sketches.

(10 marks)

QUESTION 3

On a camping trip, you purchase meat from a farmer who informs you that there have been outbreaks of *Taenia saginata* and *T. solium* within the region, but he insists that only his livestock is safe. As an experienced parasitologist, report the pathogenesis of these parasites to him and provide him with a preventative method should he sell to other people.

(10 marks)

QUESTION 4

You are appointed as a biologist at a municipality. The sewage works is often out of order resulting in the dumping of sewage into the drinking water. Motivate from a parasitological perspective to your employer why this situation is intolerable. Use 5 examples to represent all phyla studied during this course to substantiate your response. Explain how a parasite may be contracted and give a short but convincing explanation of the expected pathology.

(20 marks)

QUESTION 5

List the taxonomic groups of mites. Explain the characteristics used to define these groups. Use sketches where applicable.

(15 marks)

QUESTION 6

Discuss the adaptations present in *Sacculina* with regard to the morphology and life strategies.

(10 marks)

QUESTION 7

Discuss the pathology of *Wuchereria bancrofti* (6). Indicate how the life cycle of the parasite co-ordinates with the pathology (3). Describe treatment of patients with elephantiasis (1).

(10 marks)

QUESTION 8

Describe the adaptations towards a parasitic existence that is expressed by *Cimex lectularis*. Describe both the basic morphological adaptations (2), including mouthparts (5) as well as life strategies (3)

(10 marks)

TOTAL 100