



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY**  
**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR SCIENCE IN**  
**BIOLOGICAL SCIENCES**  
**3<sup>rd</sup> YEAR 2<sup>nd</sup> SEMESTER 2018/2019 ACADEMIC YEAR**  
**MAIN CAMPUS - REGULAR**

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**COURSE CODE:** SBI 3327  
**COURSE TITLE:** HELMINTHOLOGY  
**EXAM VENUE:** BIO LAB **STREAM (BIO)**  
**DATE:** 24/04/2019 **EXAM SESSION:** 3.00-5.00PM

**TIME: 2 HOURS**

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**Instructions:**

- 1. Answer ALL questions in Section A and Any two questions in Section B**
  - 2. Candidates are advised not to write on question paper**
  - 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**
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### **SECTION A: SHORT ANSWER QUESTIONS (30 MARKS)**

- 1) State morphological characteristics of an adult *Fasciola hepatica*. (3 marks)
- 2) A third year biological student carrying out stool examination by microscopy observed unembryonated egg with thin egg shell, an inconspicuous operculum and measuring between 130-150 X 63-90 um.
  - a) State the common name and the scientific name of the parasite associated with egg type observed by the student (1 mark)
  - b) Name the disease associated with the parasite whose egg was observed in (a) above. (1 mark)
  - c) State the infective stage of the parasite whose egg was observed by the student. (1 mark)
- 3) Compare and contrast free living and parasitic female *Strongyloides stercoralis*. (3marks)
- 4) Explain two modes of reproduction exhibited by *Trichinella spiralis*. (3marks)
- 5) Outline six pathologies associated with *Trichuris trichiura*. (3marks)
- 6) State six morphological differences between *Ancylostoma duodenale* and *Necator americanus*. (3 marks)
- 7) State the definite host, intermediate host and habitat of *Echinococcus granulosus*. (3 marks)
- 8) Outline three morphological characteristics of eggs of the only cestode that parasitizes humans that lacks an intermediate host. (3 marks)
- 9) Giving examples, state any three major routes of infection by nematodes. (3 marks)
- 10) Give an outline of the life cycle of *Paragonimus westermani*. (3 marks)

### **SECTION B: ESSAY QUESTIONS (40 MARKS)**

- 11) Describe the epidemiology, morphology, life cycle, pathology, diagnosis and control of *Ascaris lumbricoides*. (20 marks)
- 12) With specific examples, describe why pathologies observed during infection with helminthes are associated with parasites ecological niches. (20 marks)
- 13) Giving example, describe the epidemiology, morphology, life cycle, pathology, diagnosis and control of any three major blood flukes. (20 marks)
- 14) Using *Taenia solium* as an example, describe the epidemiology, morphology, life cycle, pathology, diagnosis and control of cestodes. (20 marks)