



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY**

**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES**

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR SCIENCE IN  
BIOLOGICAL SCIENCE**

**4<sup>TH</sup> YEAR 2<sup>ND</sup> SEMESTER 2018/2019 ACADEMIC YEAR**

**MAIN CAMPUS - REGULAR**

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**COURSE CODE: SBI 3443**  
**COURSE TITLE: PARASITOLOGY**  
**EXAM VENUE: BIO LAB                      STREAM: (BIO)**  
**DATE: 01/05/2019                      EXAM SESSION: 12.00-2.00PM**  
**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. Describe diversity of trypanosoma species and their hosts. (3 marks)
2. With specific examples, explain how microbiota influences parasite virulence. (3 marks)
3. Giving specific example, explain the role of cell surface decorations in parasitic evasion of host immunity. (3 marks)
4. Explain how parasites abrogates the complement system. (3 marks)
5. Name three species of Leishmania and the diseases associated with them. (3 marks)
6. Giving examples, explain how parasites disrupt host physical barriers and soluble immune mediators. (3 marks)
7. Explain how genetic variation of the parasite influences the outcome of diseases. (3marks)
8. Using specific examples, explain why laboratory specimens to be collected for diagnosis depends on the parasite route of infection. (3 marks)
9. State three strategies used in control of vector-borne parasites. (3marks)
10. Explain the role of innate immunity in control of parasitic infections. (3 marks)

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

11. Describe the life cycle of *Plasmodium falciparum* parasites and how the parasite evade both human and vector immune systems. (20 marks)
12. Giving specific examples, describe immunopathologies associated with parasitic infections in vertebrates. (20 marks)
13. Describe immune response to schistosomiasis and immune evasion by *Schistosoma mansoni*. (20 marks)
14. With specific emphasis on trypanosomes, describe host-parasite interactions. ( 20 marks)