JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

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

1st YEAR FIRST SEMESTER 2016/2017 ACADEMIC YEAR

MAIN CAMPUS - REGULAR

COURSE CODE:	**SB1 3112**
COURSE TITLE:	**INVERTEBRATE ZOOLOGY**
EXAM VENUE:	**STREAM: (BSC, BIO)**
DATE:	**EXAM SESSION:**
TIME: 2 HOURS	

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**

SECTION A: SHORT ANSWER QUESTIONS (30 MARKS)

1. State the functions of any three cell types that may be found in poriferans. (3 marks)

2. State three differences between protostomes and deuterostomes with reference to basic plan of development. (3 marks)
3. State three distinctive characteristics of the class Stelleroidea in the phylum Echinodermata. (3 marks)
4. State the function of biramous appendages in crustaceans. (3 marks)
5. State the functions and name the organism where the following structures are found (a) Omatidia (b) Succules (c) Solenocytes (3 marks)
6. Briefly describe reproduction in Tubellarians. (3 marks)
7. List any **six** characteristics of the members of the phylum Sarcomastigophora. (3 marks)
8. State three structural differences between the flagellum and the basal body. (3 marks)
9. Name three parasitic nematodes and the medical condition each causes to humans. (3 marks)
10. Name any three classes of annelids and state one distinguishing feature of each class. (3 marks)

SECTION B: ESSAY QUESTIONS (40 MARKS)

11. Discuss the characteristics of arthropods that distinguish them from the other animal phyla. (20 marks)

12. Discuss how trematodes and cestodes are adapted to parasitic existence. (20 marks)
13. Describe the life cycle of *Schistosoma mansoni.* (20 marks)
14. Describe the structure and functions of protonephridia and metanephridia in invertebrates. (20 marks)