



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES**  
**DEPARTMENT OF BIOLOGICAL SCIENCES**  
**UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE IN**  
**BIOLOGICAL SCIENCE**  
**4<sup>TH</sup> YEAR FIRST SEMESTER 2016/2017 ACADEMIC YEAR**  
**REGULAR**

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**COURSE CODE:** SBI 3412  
**COURSE TITLE:** ANIMAL BEHAVIOR  
**EXAM VENUE:** STREAM: (BSc. Bio)  
**DATE:** EXAM SESSION:  
**TIME: 2 HOURS**

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**Instructions**

- 1. Answer ALL questions in Section A (compulsory) and ANY TWO questions in Section B**
  - 2. Candidates are advised not to write on the 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)

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1. Give the relationship between behavior, motivation and stimuli. (3 marks)
2. Behavioral responses are adaptive for the survival of the individual or species. Explain. (3 marks)
3. Briefly describe the principle of “survival of the fittest”. (3 marks)
4. The classical ethological theory states that much of animal behavior is instinctive. Explain, giving examples. (3marks)
5. Justify why field observations is considered to be the best method of studying behavior. (3 marks)
6. Briefly describe communication in the following insects; bees, wasps, ants and moths.(3 marks)
7. Briefly explain the following taxes:
  - a. Tropotaxis (1 mark)
  - b. Mnemotaxis (1 mark)
  - c. Telotaxis (1 mark)
8. Give three applications of the knowledge of animal behavior. (3 marks)
9. Distinguish between circadian, circannual and lunar rhythms of behavior. (3 marks)
10. Briefly describe the adaptive value of signals made by animals. (3 marks)

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

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11. By giving examples, evaluate ‘ontogeny of behavior’ under the following headings:
  - a) Types of embryo and their behavior (6 marks)
  - b) Theories of behavior development (9 marks)
  - c) Maturation and behavior change (5 marks)
12. Describe the neuro-physiological approach of studying behavior. (20 marks)
13. Explore animal behavior patterns under the following headings:
  - a) Feeding behavior. (10 marks)
  - b) Predatory behavior (10 marks)
14. Parental care is defined as any investment by the parent in an individual offspring that increases the offspring’s chances of survival. Examine the various forms of parental care in animals. (20 marks)