



**JARAMOGI OGINGA ODONGA UNIVERSITY OF SCIENCE AND
TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**YEAR TWO SEMESTER ONE UNIVERSITY EXAMINATION FOR THE
DEGREE OF BACHELOR OF SCIENCE IN ANIMAL SCIENCE
2021/2022 ACADEMIC YEAR**

COURSE CODE: AAB 1205

COURSE TITLE: ANIMAL GROWTH AND DEVELOPMENT

DATE:

STREAM: (BSc. Animal Science)

TIME: 2 HOURS

SESSION:

Instructions:

- 1. Answer ALL questions in Section A and B and ANY TWO questions in Section C**
- 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.**

SECTION A [20 MARKS]

Answer ALL questions from this Section

1. Describe the three methods of how growth occurs. (3 marks)
2. Explain how mammalian and avian embryos obtain their nutrients. (3 marks)
3. Using a flow chart, show how nutrients are portioned in animals. (4 marks)
4. What is compensatory gain/growth in animals? (3 marks)
5. Differentiate between animal growth and animal development. (2 marks)
6. Outline the main issues in animal growth and development. (5 marks)

SECTION B [30 MARKS]

Answer ALL questions from this Section

7. Describe the following terms in the context of animal growth and development:
 - a) Ontogenesis (2 marks)
 - b) Growth energy (2 marks)
 - c) Growth speed (2 marks)
 - d) Growth intensity (2 marks)
 - e) Body hygiene (2 marks)
8. Explain, giving examples, how the following **internal factors** influence animal's growth and development:
 - a) Genotype (2 marks)
 - b) The nervous system (2 marks)
 - c) The hypophysis (2 marks)
 - d) The thyroid (2 marks)
 - e) The thymus (2 marks)
9. Explain, giving examples, how the following **external factors** influence animal's growth and development?
 - a) Temperature (2 marks)
 - b) Movement and functional gymnastics (2 marks)
 - c) Light (2 marks)
 - d) Housing hygiene (2 marks)
 - e) Breeding stage and body condition (2 marks)

SECTION C [20 MARKS]

Answer ANY ONE questions from this Section.

10. Discuss the process of development during the pre-birth and post-birth periods. (20 marks)

11. Write short notes on the following phase of animal development:

- a) Lactation period (5 marks)
- b) Juvenile period (5 marks)
- c) Post puberty time (5 marks)
- d) Influences undergone when the animal exits stock (5 marks)

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- a) Differentiate between true growth and fattening (5 marks)
 - b) How is growth measured? (5 marks)
 - c) Why is fast growth desirable? (5 marks)
 - d) Why do we study growth? (5 marks)