



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

**THIRD YEAR SEMESTER ONE UNIVERSITY EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE IN ANIMAL SCIENCE**

2022/2023 ACADEMIC YEAR

COURSE CODE: AAB 1309

COURSE TITLE: Animal Reproduction and Technology

EXAM VENUE: STREAM: Bachelor of Science (Animal Science)

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 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.

Question 1

Define the following terms as used in animal reproduction.

- a) Reproduction. (1 mark)
- b) Binary fission. (1 mark)
- c) Oestrous cycle. (1 mark)
- d) Parturition. (1 mark)
- e) Reproduction technology. (1 mark)

Question 2

Differentiate between the following:

- a) Sexual and asexual reproduction. (2 marks)
- b) Gestation and parturition. (2 marks)
- c) Oestrous synchronization and super ovulation. (2 marks)
- d) Sex limited and sex linked traits (2 marks)
- e) Frozen semen and fresh semen. (2 marks)

Question 3

- a) Differentiate between reproduction in birds such as hen and mammals such as cow (2 marks)
- b) State the main steps in embryo transfer. (3 marks)
- c) When is appropriate to use fresh semen? (2 marks)
- d) What are the advantages of fresh semen over frozen semen? (3 marks)
- e) List five reproduction technologies that have been used in farm animals. (5 marks)

SECTION B [30 MARKS]

Answer TWO questions from this Section.

Question 4

Discuss artificial insemination under the following:

- a) Semen collection. (10 marks)
- b) Semen processing. (10 marks)

Question 5

Write short notes on the following:

- Multiple ovulations. (4 marks)
- Donor female. (4 marks)
- In vitro fertilization. (3 marks)
- Sexed semen. (4 marks)
- Assisted reproductive technologies. (5 marks)

Question 6

Discuss reasons for the low adoption of reproduction technology with reference to animal production in Kenya. (20 marks)