University of Choice

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS
UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER MAIN EXAMINATIONS FOR THE DEGREE OF
BACHELOR OF SCIENCE IN ANIMAL PRODUCTION AND PROCESSING

COURSE CODE: AAP 223

COURSE TITLE: DAIRY CATTLE PRODUCTION

DATE: 24.04.2023   **TIME: 12-2PM**

INSTRUCTIONS TO CANDIDATES

Answer ALL questions in section A and any TWO in section B

SECTION A: ANSWER ALL QUESTIONS (30 MARKS)

1. Explain the significance of animal breeding programs for milk production. **(6 marks)**

2. Select TWO appropriate dairy cattle breed for each of three specified situations

   i) Semi-arid climatic conditions **(2 marks)**

   ii) Humid and sub-humid zones **(2 marks)**

   iii) Smallholder crop-livestock mixed farms with less than one hectare of land **(2 marks)**

3. Compare the management of a heifer with that of milking cows on a specified dairy farm.

   (6 marks)

4. List FIVE farm husbandry factors which can influence the lactation cycle. **(6 marks)**

5. Briefly describe the roles of the following hormones during the oestrus cycle and maintenance of pregnancy

   (a) Estrogen **(3 marks)**

   (b) Progesterone **(3 marks)**

SECTION B: Answer any two questions (40 marks)

6. (a) Explain factors affecting sales of dairy products by small-scale farmers in Kenya. **(10 marks)**

   (b) Discuss strategies/policies that County Governments can put in place to help solve the dairy product marketing challenges **(10 marks)**

7. (a) Compare and contrast management of a calves with that lactating dairy cows   **(10 marks)**

(b) Briefly explain FIVE challenges faced by small-scale crop-livestock farmers in raising dairy calves.

8. (a) Describe any THREE artificial reproductive techniques used in breeding improved dairy cattle (i) artificial insemination (ii) hormonal synchronization, (iii) sexed semen and (iii) Embryo transfer

(12 marks)

(c) Briefly explain the strengths and weakness of each of the four breeding method in 8 (a)

(8 marks)