

2425/102

ANIMAL PRODUCTION I

June/ July 2022

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN AGRICULTURE

MODULE I

ANIMAL PRODUCTION I

3 hours

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INSTRUCTIONS TO CANDIDATES

*This paper consists of **EIGHT** questions.*

*Answer any **FIVE** questions in the answer booklet provided.*

All questions carry equal marks.

Maximum marks for each part of a question are indicated.

Candidates should answer the questions in English.

This paper consists of 3 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

1. (a) Highlight the activities carried out during the following livestock management practices:
- (i) feeding and watering;
 - (ii) egg collection.
- (10 marks)
- (b) Describe steaming up under the following:
- (i) meaning;
 - (ii) advantages.
- (10 marks)
2. (a) Define each of the following terms as used in animal breeding:
- (i) pure breeding;
 - (ii) pedigree;
 - (iii) hybrid vigour;
 - (iv) upgrading.
- (4 marks)
- (b) Explain measures used in prevention of inbreeding in livestock. (6 marks)
- (c) Differentiate between performance testing and progeny testing. (4 marks)
- (d) (i) State the principle of Hardy-Weinberg equilibrium.
- (ii) Highlight **five** conditions that make Hardy-Weinberg equilibrium hold. (6 marks)
3. (a) Differentiate between the following terms as used in livestock diseases:
- (i) contagious and infectious diseases;
 - (ii) quarantine and isolation;
 - (iii) septicaemia and oedema;
 - (iv) acute and sub-acute diseases.
- (8 marks)
- (b) Describe anthrax disease under the following:
- (i) aetiology;
 - (ii) mode of transmission;
 - (iii) symptoms;
 - (iv) control.
- (12 marks)

4. (a) Explain feeding standards under the following:
- (i) meaning;
 - (ii) importance.
- (10 marks)
- (b) Explain **five** factors that influence digestibility of fodder in animal nutrition.
- (10 marks)
5. (a) Describe drought coping strategies in rangelands.
- (10 marks)
- (b) Highlight range improvement practices under the following methods:
- (i) bush control;
 - (ii) range resource conservation;
 - (iii) range re-seeding.
- (10 marks)
6. (a) Highlight **seven** reasons for weight determination in animals.
- (7 marks)
- (b) Describe vaccination in animals under the following:
- (i) factors to consider when administering vaccines;
 - (ii) types of vaccines;
 - (iii) properties of effective vaccines;
 - (iv) reasons for vaccination.
- (13 marks)
7. (a) Explain **four** reasons for feeding growing animals differently from mature ones.
- (8 marks)
- (b) Describe rotational system of pasture utilization.
- (12 marks)
8. (a) State **five** factors that influence characterization of livestock production systems.
- (5 marks)
- (b) Highlight the characteristics of each of the following animal production systems:
- (i) intensive;
 - (ii) pastoralism;
 - (iii) feedlot.
- (15 marks)

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