

081106T4AEX

AGRICULTURAL EXTENSION LEVEL 6

AGR/OS/EXT/CR/01/6 Printed By Technical And Vocational College Produce

Conventional and Non-Conventional Livestock

November/December 2025

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WRITTEN ASSESSMENT

Time: 3 HOURS

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INSTRUCTIONS TO CANDIDATE

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1. The paper consists of **TWO** sections: **A** and **B**.
2. Answer **ALL** questions in section A and **ANY THREE** (3) questions in section B.
3. Marks for each question are indicated in the brackets.
4. Candidates are provided with a ~~separate~~ answer booklet
5. **DO NOT** write on this question paper.

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This paper consists of FIVE (5) printed pages

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

SECTION A (40 MARKS)

Attempt All Questions in this Section

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1. Define the term “Bio-security” as used in animal production. (2 Marks)

2. Embryo transfer is a technique used in assisted reproduction where embryos are placed from a female animal to establish pregnancy. Identify TWO different types of embryo transfer. (2 Marks)

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3. Outbreeding refers to the mating of unrelated animals within the same breed or between different breeds. It is practiced to improve genetic diversity, enhance performance, and reduce the chances of inbreeding depression. State TWO systems of outbreeding. (2 Marks)

4. Farms apply different techniques to collect viable semen while prioritizing the safety

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of both the animal and the handler. List TWO commonly used methods of semen collection. (2 Marks)

5. The selection of breeding tools and equipment is achieving successful reproduction while safeguarding animal welfare. State THREE factors commonly considered when making this choice. (3 Marks)

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6. A well-constructed fish pond consists of several parts of a fish pond. List THREE parts of a fish pond. (3 Marks)

7. Milk fever is a metabolic disease in lactating cows and caused by calcium deficiency in the body of the animal, which is important for contraction of muscles. State THREE signs of milk fever. (3 Marks)

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8. Poultry farming can be practiced under different management systems, each designed to suit specific production goals. State THREE types of poultry system. (3 Marks)

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9. The effectiveness of animal breeding depends on the use of appropriate tools and equipment that promote accuracy, efficiency, and animal welfare. List FOUR examples of breeding equipment. (4 Marks)

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10. The environment in which livestock are raised greatly influences their growth, health, and productivity. Identify THREE factors considered in choosing the appropriate environment for growing stock. (3 Marks)

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11. Breeding is a fundamental practice in animal production providing desirable traits and ensuring sustainable livestock development. List THREE reasons for breeding. (3 Marks)

12. The design and construction of a dairy shed have a direct impact on the comfort, health, and productivity of dairy animals. State THREE factors to consider in constructing a dairy shed. (3 Marks)

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13. To ensure proper growth and early development, young animals require special attention in their diet. State THREE factors that should be considered when feeding young animals. (3 Marks)

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14. A plunge dip is a specially designed structure used for immersing animals in a solution to control external parasites. It consists of several parts serving a specific purpose. State FOUR parts of a plunge dip. (4 Marks)

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SECTION B (60 MARKS)

Attempt THREE Questions in this Section

15.

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a) The ^{Date: 20.11.2025 03:08 PM} Mt Tsavo National Park has been tasked by the cabinet secretary to explain factors that influence population changes in wildlife. As assistant reserve manager, advise him on FIVE possible factors that influence ^{Printed By Technical And Vocational College} population changes in wildlife. ^{Date: 20.11.2025 03:08 PM} (10 Marks)

16.

a) James, a new poultry farmer, seeks your guidance in identifying the differences between good and poor layers. As an extension officer, describe FIVE distinct characteristics that differentiate good layers from poor layers. ^{Printed By Technical And Vocational College} (10 Marks)

b) The Department of Agriculture is keen on implementing biosecurity measures in an attempt to safeguard its poultry production unit. Discuss FIVE advantages they are likely to gain from doing so. ^{Printed By Technical And Vocational College} (10 Marks)

17.

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a) During an apiary inspection, a beekeeper discovers that one of the colonies has completely deserted its hive. As a student, describe FIVE reasons that may cause bees to abscond from a hive. ^{Printed By: Technical And Vocational College} (10 Marks)

b) Using knowledge of animal physiology and the digestive system, discuss FIVE differences between ruminant and non-ruminant conventional animals. ^{Printed By: Technical And Vocational College} (10 Marks)

18.

a) Printed By: Technical And Vocational College
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Natural mating is common among small-scale farmers, yet it presents various challenges. Discuss FIVE disadvantages of using natural mating in cattle production. (10 Marks)

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b) Printed By: Technical And Vocational College
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A farmer has established a fish pond to improve household nutrition and increase income. Explain FIVE management practices the farmer should carry out to ensure healthy fish growth and high yield. (10 Marks)

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