higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

ANIMAL PRODUCTION
NQF LEVEL 3

(1011023)

4 November 2022 (X-paper)
09:00–12:00

This question paper consists of 7 pages.

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TIME: 3 HOURS
MARKS: 150

INSTRUCTIONS AND INFORMATION

1. Answer all the questions.
2. Read all the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Start each section on a new page.
5. Use only a black or blue pen.
6. Write neatly and legibly.

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SECTION A

QUESTION 1

1.1 Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number (1.1.1–1.1.10) in the ANSWER BOOK.

1.1.1 The … system functions as a communication link that connects the parts of the body to the brain and the spinal cord.

A genital
B respiratory
C circulatory
D nervous

1.1.2 A rusty-coloured breed of pigs known for its good bone development.

A Hampshire
B Landrace
C Kolbroek
D Duroc

1.1.3 All sense organs have a similar basic structure consisting of special cells called …

A sensory system
B receptor cells
C chemoreceptors
D nerve impulse

1.1.4 The … is a crossbreed between the Dorset horn and German merino breeds.

A Dalesbred
B Dormer
C Debouillet
D Dorper

1.1.5 A reproductive disease in a herd of swine that is caused by a group of similar viruses:

A SMEDI
B E. coli
C MMA
D Greasy pig

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1.1.6 The tube through which urine is excreted is called …

A urethra
B bladder
C oviduct
D ureter

1.1.7 Disease in sheep caused by insect bites:

A Blue tongue
B Botulism
C Pasteurellosis
D Enterotoxaemia

1.1.8 … is used for crushing the vas deferens and the blood vessels that supply the testes.

A Elastic band
B Elastrator
C Burdizzo
D Rubber ring

1.1.9 System of breeding sheep only with others of the same breed.

A Outbreeding
B Pure-breeding
C Crossbreeding
D Upgrading

1.1.10 Help birds in steering and braking during flight.

A Tail feathers
B Down feathers
C Scapular feather
D Large feathers

(10 × 1) (10)

1.2 Give ONE term for each of the following descriptions by writing it next to the question number (1.2.1–1.2.10) in the ANSWER BOOK

1.2.1 Anaerobic respiration that takes place in animals and certain bacteria and fungi.

1.2.2 The process by which rawhides are treated with chemicals and physical process to become leather.

1.2.3 An involuntary and unconscious action resulting from a particular stimulus.

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1.2.4 A process by which substances are filtered out of the blood into the Bowman's capsule.

1.2.5 A state of deep unconsciousness caused by too little glucose in the blood supplied to the brain cells.

1.2.6 The adjustment of the shape of the lens to form a clear image on the retina.

1.2.7 Muscles that help in the regulation of the body temperature of an animal.

1.2.8 Maintenance of a constant internal state.

1.2.9 A flight-or-fight hormone.

1.2.10 A process considered to be the reverse of photosynthesis.

(10 × 1) (10)

1.3 The scrotum is an important organ in the reproductive system of an animal.

1.3.1 Explain the importance of the scrotum in animals. (4)

1.3.2 Explain how the scrotum controls the temperature of the testes. (6)

[30]

QUESTION 2

2.1 Outline the process that occurs when the body of an animal homeostatically controls salt levels in the body. (12)

2.2 Describe the process whereby the central nervous system controls and coordinates impulses in the body of an animal. (4)

2.3 Distinguish between the *primary* and *secondary organs* of the male genital system. (2 × 2) (4)

[20]

TOTAL SECTION A: 50

SECTION B

QUESTION 3

3.1 Wool is ONE of the most important products of sheep farming in South Africa.

3.1.1 Name the main wool-bearing sheep breed in South Africa. (1)

3.1.2 Outline the importance of the body conformation of the sheep breed in QUESTION 3.1.1. (5)

3.1.3 Name the method that is used in harvesting wool from a sheep. (1)

3.2 Dorper is one of the most common mutton breeds in South Africa.

3.2.1 Name the two sheep breeds from which the dorper was bred. (2)

3.2.2 Outline SIX characteristics that make the Dorper suitable for the environmental conditions of South Africa. (6)

3.2.3 Name any other TWO South African mutton breeds besides the Dorper. (2)

3.3 Outline SIX characteristics that should be considered when selecting rams for a breeding programme. (6)

3.4 Name TWO dual-purpose sheep breeds in South Africa. (2)

[25]

QUESTION 4

4.1 Explain the significance of crossbreeding in sheep farming. (5)

4.2 Outline the process that is followed when castrating sheep using the Burdizzo. (5)

4.3 Recommend the correct procedure used to control the spread of internal parasites on the farm. (6)

4.4 Explain the importance of tail docking in sheep. (2)

4.5 Explain how farmers should handle sheep which are transported from the farm to the abattoir to avoid injury. (7)

[25]

TOTAL: 50

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SECTION C

QUESTION 5

5.1 What is pigswill? (2)

5.2 Outline the factors that should be considered when feeding pigs during the following stages:

5.2.1 Piglets (10)

5.2.2 Lactation (10)

5.3 Appraise inbreeding as the best method of breeding pigs. (3)
[25]

QUESTION 6

6.1 Define the term *trait.* (2)

6.2 Explain FOUR traits that should be considered when selecting pigs for breeding purposes. (4 × 2) (8)

6.3 Outline the aspects that should be considered when constructing a boar house. (10)

6.4 Name FIVE diseases that affect pigs. (5)
[25]

TOTAL SECTION C: 50
GRAND TOTAL: 150

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