higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

ANIMAL PRODUCTION
NQF LEVEL 4

(1011004)

8 November 2018 (Y-Paper)
13:00–16:00

This question paper consists of 9 pages.

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TIME: 3 HOURS
MARKS: 150

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions in SECTION A and SECTION B.
2. Answer either SECTION C or SECTION D. If both sections are answered, only ONE SECTION will be marked.
3. Read ALL the questions carefully.
4. Number the answers according to the numbering system used in this question paper.
5. Start each section on a NEW page.
6. Write neatly and legibly.

NCV

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 Which ONE of the following is regarded as a dual breed?

A Bonsmara
B Drakensberger
C Simmentaler
D Jersey

1.1.2 The popular breeding season for cattle among commercial farmers is … days.

A 126
B 100
C 90
D 65

1.1.3 The development of Graafian follicles in the ovary occur during the … phase.

A pre-oestrus
B oestrus
C met-oestrus
D di-oestrus

1.1.4 Which ONE of the following hormones is responsible for the maintenance of pregnancy?

A Follicle Stimulating Hormone (FSH)
B Oestrogen
C Luteinising Hormone
D Luteotrophic hormone

1.1.5 Which ONE of the following would not be found on the back of a cow in oestrus?

A Rough coat
B Mud
C Feed remains
D Saliva marks

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1.1.6 When the corpus luteum is removed from the ovary, the/an … develops.

A Graafian follicle
B Umbilical cord
C Fertilised ovum
D peritoneum

1.1.7 Calves from dairy cows could be weaned from … month(s).

A 0 to 2
B 4 to 6
C 7 to 9
D 10 to 12

1.1.8 The ability to get nutrients from roughage in calves is determine by the development of:

A Abomasum.
B Omasum.
C Reticulam.
D Rumen.

1.1.9 Which ONE of the following species of ticks transmits heart water disease?.

A Blue tick
B Bont tick
C Brown-ear tick
D Red-legged tick

1.1.10 The conditions that do NOT favour the development of round worms:

A Warmth
B Moisture
C Dryness
D Nutrient availability

(10 × 1) (10)

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1.2 Choose a description from COLUMN B that matches a term in COLUMN A. Write only the letter (A–O) next to the question number (1.2.1–1.2.10) in the ANSWER BOOK

COLUMN A		COLUMN B	
1.2.1	Nguni breed	A	recurring physiological changes introduced by reproductive hormones
1.2.2	Oestrus cycle	B	bull remains with the cows the entire year
1.2.3	Fertilisation	C	causes loss of foetus by pregnant cows
1.2.4	Oestrogen	D	formation of a zygote
1.2.5	Elastic teat	E	relationship to a certain ancestor is maintained
1.2.6	Selection	F	fluid between cells
1.2.7	Non-restricted breeding	G	animals from different breeds
1.2.8	Mastitis	H	relatively small body
1.2.9	Serum	I	stimulate(s)release of milk
1.2.10	Line breeding	J	extra milk is produced
		K	ensure(s) that high performing individuals produce offspring
		L	bring(s) stability
		M	sterilised after use
		N	liquid part of blood from which blood cells have been removed
		O	increased blood supply to the uterus

(10 × 1) (10)

1.3 Complete the following sentences by filling in the correct word or words. Write only the word or words next to the question number (1.3.1–1.3.5) in the ANSWER BOOK.

1.3.1 In the sour veld region calving could be planned for … season when grazing becomes available.

1.3.2 The farmer should have enough … for the cows that calve in winter.

1.3.3 The type of veld where grazing remains nutritious for the entire year is …

1.3.4 The … gland is found at the base of the brain and secretes most hormones that control the oestrus cycle.

1.3.5 A narrow enclosure in which cattle can be securely contained in order for them to be restrained is called …

(5 × 1) (5)
[25]

QUESTION 2

2.1 The Brahman breed is one of the popular breeds among farmers.

2.1.1 For which enterprise is this breed best suited? (1)

2.1.2 State the distinguishing characteristics of the Brahman breed. (10)

2.2 The planning of calving and lactation is determined by the way the oestrus cycle is handled on the farm.

2.2.1 Define synchronisation with respect to cattle production. (2)

2.2.2 Explain how oestrus synchronization can be used in dairy production to benefit the farmer economically. (5)

2.2.3 Explain why farmers prefer calves born in autumn. (2)

2.3 List the circumstances under which the farmer will handle a dairy calf. (5)
[25]

TOTAL SECTION A: 50

NC(V)

SECTION B

QUESTION 3

3.1 Carbohydrates, like other nutrients, are important in the lives of livestock on the farm.

3.1.1 State THREE classes of carbohydrates. (3)

3.1.2 Define *condensation*. (2)

3.2 Biuret tests are used to investigate the presence of one of the nutrients in the feed. Outline the procedure to be followed when conducting the Biuret test in the laboratory. (8)

3.3 State the differences between rumen and omasum with regard to structure and content. (2 × 2) (4)

3.4 Justify why the Nguni cattle breed is easily adaptable to any of the climatic zones of southern Africa. (8)
[25]

QUESTION 4

4.1 Some omnivores and herbivores are economically important for farmers.

4.1.1 Define the term *omnivores*. (2)

4.1.2 Give TWO examples of farm animals that are classified as omnivores. (2)

4.2 Define *homogenization*. (2)

4.3 State the differences between milk pasteurization and sterilization. (10)

4.4 List FIVE nutrients that form the dry material of animal feed. (5)

4.5 A farmer can switch the ration of ruminants rapidly from grain to roughage. Explain why the farmer cannot change the ration rapidly from roughage to grain. (4)
[25]

TOTAL SECTION B: 50

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Answer **SECTION C** or **SECTION D.**

SECTION C

QUESTION 5

5.1 Name FIVE structures that are found on the quarter of an udder. (5)

5.2 Explain the role of a teat in the udder. (4)

5.3 Explain how wastewater from a milking parlour can be used to benefit crops on a dairy farm. (12)

5.4 List FOUR factors that could be used to assess milk quality in the milking parlour. (4)
[25]

QUESTION 6

6.1 Name FOUR aspects of the milk cooling tank that should be monitored regularly. (4)

6.2 Describe how wastewater from the milking parlour can be disposed of. (2)

6.3 Record keeping is a necessity for the proper functioning of a dairy farm.

6.3.1 Name TWO methods of keeping records on a dairy farm. (2)

6.3.2 Explain why a dairy farmer should keep records of milk production for individual animals or cows. (8)

6.4 Explain the reasons for milk pasteurisation. (9)
[25]

TOTAL SECTION C: 50

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SECTION D

QUESTION 7

7.1 Name THREE vegetation sites which are suited for ostrich farming. (3)

7.2 Describe how feathers are used in the regulation of body temperature. (4)

7.3 List the items that are made from the following ostrich products:

7.3.1 Leather (4)

7.3.2 Feathers (4)

7.4 What are the differences between the South African breed and the Reds ostrich breed? (6)

7.5 Explain how ostrich eggs in an incubator should be treated. (4)
[25]

QUESTION 8

8.1 What advice would you give to a farmer on how to catch an ostrich? (7)

8.2 State TWO examples of biosecurity measures a farmer can use on the farm (2)

8.3 The control of parasites and prevention of diseases among ostriches by farmers is important.

8.3.1 Explain how the immune system works in the body of an ostrich. (3)

8.3.2 Describe the ways in which an ostrich farmer can control or prevent the spread of contagious diseases. (4)

8.4 Explain how a farmer can supplement feed for ostriches on the farm. (9)
[25]

TOTAL SECTION D: 50
GRAND TOTAL: 150

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