higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

ANIMAL PRODUCTION
NQF LEVEL 3

(1011023)

12 November 2019 (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 BLUE or BLACK ink.
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 correct 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 … is a process within which any energy-rich molecule is broken down in the presence of oxygen.

A Aerobic respiration
B Lactic acid fermentation
C Anaerobic respiration
D Alcoholic fermentation

1.1.2 Which of the following is not part of the nervous system?

A Spinal cord
B Motor nerves
C Fallopian tube
D Brain

1.1.3 Fineness of wool is determined by the size of the …

A crimps.
B fur.
C hide.
D bale.

1.1.4 All sensory organs have a similar basic structure consisting of special cells called …

A pinna.
B senses.
C chemoreceptors.
D receptors.

1.1.5 Which ONE of the following is a sense organ of taste?

A Skin
B Nose
C Ear
D Tongue

1.1.6 The … contains centres that control functions such as appetite, body temperature and blood pressure.

A thalamus
B spinal cord
C hypothalamus
D cerebellum

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1.1.7 The function of the kidney capsule is to cover and protect the …

A cortex.
B kidneys.
C pelvis.
D medulla.

1.1.8 The … is the part of the female reproductive system in which the foetus develops during pregnancy.

A ovary
B uterus
C rectum
D clitoris

1.1.9 Which of the following is part of the primary reproductive system of the male genital system?

A Epididymis
B Cowper glands
C Prostate gland
D Vesicular gland

1.1.10 The main function of the liver is to control … levels.

A salt concentration
B water
C glucose
D body temperature

(10 × 1) (10)

1.2 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (1.2.1–1.2.10) in the ANSWER BOOK.

1.2.1 Microbial digestion is an anaerobic process that produces an energy-rich by-product called fatty acid.

1.2.2 The epidermis consists of the outer cornified layer, the middle granular layer and the inner Malpighian layer.

1.2.3 Fineness of wool is the actual measurement of the thickness of the wool fibre which is measured in microns.

1.2.4 Dorset Horn sheep are capable of producing superfine wool with a good staple length.

1.2.5 Blowfly is an example of common internal parasites affecting sheep.

1.2.6 Progesterone stimulates the development of female reproductive organs and the repair of the uterine wall.

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1.2.7 The Blackhead Persian thrives well in semi-arid areas with short, thorny bushes and hardy grasses.

1.2.8 The epididymis carries sperm to the urethra, which runs in the centre of the penis.

1.2.9 The main function of the central nervous system is to control and coordinate body activities.

1.2.10 The sclera of the eye is made up of tough fibrous materials and it is opaque, except for a part in the front of the eye where it is transparent.

(10 × 1) (10)

1.3 Choose a term from COLUMN B that matches a description in COLUMN A. Write only the letter (A–L) next to the question number (1.3.1–1.3.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
1.3.1	The primary reproductive organ of the female genital system	A	pituitary gland
1.3.2	The part of an eye that determines the amount of light entering the eye	B	glomerule
1.3.3	Hormone that stimulates the secretion of testosterone in the testes	C	landrace
1.3.4	A white-haired, pink-skinned pig with forward-pitched, drooping ears	D	pupil
1.3.5	Brain part which is the centre of intelligence, memory, learning, voluntary actions and emotions	E	ovary
1.3.6	A commercial product that is made from ostrich skin	F	luteinising
1.3.7	A disease that affects pigs and is caused by the bacterium, *E. coli*.	G	Tamworth
1.3.8	A network of small blood vessels which looks like a ball and is located in the Bowman's capsule	H	colibacillosis
1.3.9	An endocrine organ that controls other glands and is sometimes called the master gland	I	re-absorption
1.3.10	A process whereby substances are taken into the blood for a second time	J	attaché case
		K	prolactin
		L	cerebral cortex

(10 × 1) (10)

2.1 Explain why the tail feathers are important to birds. (2)

2.2 Outline the process that occurs when the body of an animal homeostatically control salt levels in the body. (11)

2.3 State TWO functions of the ear. (2)

2.4 List FIVE commercial products produced from animal hide and skin. (5)
[50]

TOTAL SECTION A: 50

SECTION B

QUESTION 3

3.1

> Many sheep farmers in South Africa have come to the conclusion that the answer for the slaughter lamb producer is the Dormer ram. However, the question remains why the Dormer is preferred. Over the years, Dormer lambs held their own at every show and slaughter lamb competition. During the last 10 years, Dormer lambs have obtained several champion single-lamb carcasses as well as champion groups at various shows throughout South Africa.

[Source: *www 2broersdormers.co.za/Index.htm*]

3.1.1 What is a *slaughter lamb*? (2)

3.1.2 Recommend to other farmers the Dormer sheep as the best mutton breed that is well suited to South African environmental conditions. (10)

3.2 Name TWO indigenous breeds of sheep that are used in South Africa. (2)

3.3 Critically discuss THREE factors that affect stocking intensity of the camp. (6)

3.4 Outline FIVE disadvantages of overgrazing the veld. (5)
[25]

QUESTION 4

4.1 Justify why cross breeding is important in sheep farming. (5)

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

4.3 Recommend the correct approach you can use to control the spread of internal parasites on the farm. (6)

4.4 Explain why it is essential to do 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 SECTION B: 50

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SECTION C

QUESTION 5

5.1 What is *pigswill*? (2)

5.2 Outline the factors that farmers must consider when feeding pigs in the following stages:

5.2.1 Piglets

5.2.2 Lactation

(2 × 10) (20)

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

QUESTION 6

6.1 Outline FIVE factors to consider when constructing a boar house. (5 × 2) (10)

6.2 When selecting animals for breeding purposes, the pig farmer decides which animals within the population will be used to produce the next generation.

Recommend and explain FOUR traits that should be considered when selecting pigs for breeding purposes. (4 × 2) (8)

6.3 List THREE symptoms of anaemia in piglets. (3)

6.4 Identify FOUR stress factors that can cause E. coli infection. (4)
[25]

TOTAL SECTION C: 50
GRAND TOTAL: 150

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