higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

# NATIONAL CERTIFICATE (VOCATIONAL)

## ANIMAL PRODUCTION
### NQF LEVEL 2

(1011022)

**18 November 2019 (Y-Paper)**
**13:00–16:00**

**This question paper consists of 8 pages.**

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**TIME: 3 HOURS**
**MARKS: 150**

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**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

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 (1.1–1.10) in the ANSWER BOOK.

1.1 Which ONE is the substance responsible for the cell's ability to transport oxygen?

A Hepatic portal system
B Haemoglobin
C Platelets
D Capillaries

1.2 The … transport(s) dissolved nutrients to all parts of the body that need them.

A white blood corpuscles
B pulmonary arteries
C plasma
D lymph system

1.3 Which ONE of the following is not part of the chicken's reproductive tract?

A Cloaca
B Ceca
C Infundibulum
D Shell guard

1.4 The … is an example of a type of commercial broiler breed used in South Africa.

A Ross
B Ovambo
C Necked-neck
D Australorp

1.5 Which of the following is NOT part of the cardiovascular system?

A Heart
B Kidneys
C Lungs
D Blood vessels

1.6 … causes birds to have sores on their breasts and hocks.

A Understocking
B Stocking density
C Overstocking
D Mortality

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1.7 The … joint connects bones that are not required to move.

A cartilaginous
B hinge
C synovial
D fibrous

1.8 Microbial digestion takes place in the … .

A reticulum
B rumen
C omasum
D book stomach

1.9 Which of the following is NOT a microorganism found in the rumen?

A Bacteria
B Fungi
C Protozoa
D Virus

1.10 The … is distensible and chickens use it to temporarily store food.

A crop
B ventriculus
C gizzard
D beak

(10 × 1) **[10]**

**QUESTION 2**

Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (2.1–2.10) in the ANSWER BOOK.

2.1 De-oxygenated blood is blood that has been enriched with oxygen in the lungs.

2.2 The pulmonary circulatory system helps to move blood between the heart and the body.

2.3 Red blood cells are concerned with the body's immune system.

2.4 Blue tongue is a bacterial disease caused by midges.

2.5 Coccidiosis is a disease caused by protozoa called coccidium and affects chickens, ducks and geese.

2.6 Saanen is an example of dairy producing goat breed used in South Africa.

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2.7 The circulatory system transport nutrients, oxygen and water to all parts of the body.

2.8 The renal artery is responsible to carry oxygenated blood to the kidneys.

2.9 The reproductive system of chickens consists of the ovary and the oviduct.

2.10 The skeleton (framework of bones) acts as anchor for the skeletal muscles, supports locomotion and protects vital organs.

(10 × 1) **[10]**

**QUESTION 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 (3.1–3.10) in the ANSWER BOOK.

| COLUMN A | | COLUMN B | |
|---|---|---|---|
| 3.1 | Yellowish liquid that consists of blood, nutrients, hormones, enzymes, which dissolved gases | A | phagocytes |
| 3.2 | Cells that break down foreign particles and germs, and protect against infections | B | lymphocytes |
| 3.3 | The circulatory system that controls the movement of blood within the heart chambers | C | ball and socket |
| 3.4 | Part of a chicken's digestive system that grabs food | D | liver |
| 3.5 | Joint that allows for radial and circular movement in almost any direction | E | peristalsis |
| 3.6 | Stomach compartment that consists of folds which remove water from the feed | F | proventriculus |
| 3.7 | Organ that makes and stores bile in the gall bladder | G | plasma |
| 3.8 | Repeated tightening and relaxing movements of the muscle walls in the digestive tract that push food forward | H | beak |
| 3.9 | Muscular organ with a hard lining | I | renal |
| 3.10 | Vein which collects de-oxygenated blood from the kidneys | J | coronary |
| | | K | ventriculus |
| | | L | omasum |

(10 × 1) **[10]**

## QUESTION 4

4.1 Describe the function of red blood cells in the body. (4)

4.2 Distinguish between *veins* and *arteries*. (4)

4.3 List THREE parts of a chicken's respiratory system. (3)

4.4 Outline the main function of the following digestive organs.

4.4.1 Reticulum

4.4.2 Large intestine

4.4.3 Caecum

4.4.4 Omasum

(4 × 2) (8)

4.5 What are *lymphocytes*? (1)
**[20]**

**TOTAL SECTION A: 50**

## SECTION B

## QUESTION 5

5.1 List FOUR sources of protein that originate from plants. (4)

5.2 Distinguish between *essential* and *non-essential* amino acid. (2)

5.3 Outline SEVEN factors that affect nutrients and feed intake by chickens.
(7 × 2) (14)

5.4 Name FIVE benefits of feeding chickens granular feed. (5)
**[25]**

## QUESTION 6

6.1 Mr Edwards approached you as an extension officer for advice with regard to the housing of laying chickens.

Outline the advantages of the battery system for housing of laying chickens to Mr Edwards. (6)

6.2 Describe the free-range system of rearing chickens. (3)

6.3 Criticize the free-range system of keeping chickens. (2 × 2) (4)

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6.4 What are the effects of raising chickens in a poorly ventilated house? (4)

6.5 Criticize the battery system of keeping chickens. (2 × 2) (4)

6.6 Outline the benefits derived from practising the 'All in All out' system when rearing chickens. (4)

**[25]**

**TOTAL SECTION B: 50**

## SECTION C

## QUESTION 7

7.1 Study the photo below and answer the questions.



[Source:*http://boerboksa.co.za*]

7.1.1 Identify the breed of goat in the picture above. (2)

7.1.2 Describe the external characteristics of the breed of goat in QUESTION 7.1.1. (3)

7.1.3 Outline FIVE important traits that contribute to the breed in QUESTION 7.1.1 as being classified as the best meat-producing goat in the world. (5)

7.2 List FOUR products acquired from Angora goats. (4)

7.3 Explain how one should feed goats during the following stages:

7.3.1 Pregnancy

7.3.2 Lactation

(2 × 3) (6)

7.4 Describe an extensive system of goat farming. (5)

**[25]**

## QUESTION 8

8.1 Suggest treatment of goats suffering from the following feeding disorders:

8.1.1 Milk fever

8.1.2 Acidosis

8.1.3 Pregnancy toxaemia

8.1.4 Bloating

8.1.5 Pulpy kidney

(5 × 2) (10)

8.2 List THREE methods used to castrate goats. (3)

8.3 Name FIVE symptoms of goats suffering from heartwater. (5)

8.4 Outline the procedure for administering dosing medication to goats. (7)
**[25]**

**TOTAL SECTION C: 50**
**GRAND TOTAL: 150**

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