



**higher education  
& training**

Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

**NATIONAL CERTIFICATE (VOCATIONAL)**

**ANIMAL PRODUCTION  
NQF LEVEL 2**

(1011022)

**11 December 2020 (X-paper)  
09:00–12:00**

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

535Q1N2011

<p><b>TIME: 3 HOURS</b> <b>MARKS: 150</b></p>
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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 a black or blue pen.
  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 part of the chicken's digestive system is responsible for the breakdown of food?
- A Small intestine
  - B Oesophagus
  - C Beak
  - D Vent
- 1.2 The ... is an example of a chicken breed that lays brown eggs.
- A Hubbard Leghorn
  - B Amberlink
  - C White Leghorn
  - D Shaver Starcross 288
- 1.3 Which part of a chicken is responsible for grasping feed and passing it to the oesophagus?
- A Cloaca
  - B Beak
  - C Gall bladder
  - D Oviduct
- 1.4 The ... system supplies oxygen to the blood and removes carbon dioxide from the blood.
- A skeletal
  - B systemic
  - C cardiovascular
  - D respiratory
- 1.5 ... is/are responsible for the cells' ability to transport oxygen.
- A Plasma
  - B Haemoglobin
  - C Platelets
  - D Lymphocytes
- 1.6 The ... is not a part of the small intestine.
- A duodenum
  - B ileum
  - C omasum
  - D jejunum


- 1.7 ... is a joint that allows rotation around an axis.
- A Gliding
  - B Ellipsoid
  - C Saddle 
  - D Pivot
- 1.8 The stomach compartment that is responsible for grinding feed and removing water from the feed, is the ...
- A omasum.
  - B reticulum.
  - C gall bladder.
  - D small intestine.
- 1.9 The ... is an indigenous breed in South-Africa, kept as free-range chickens.
- A Naked Neck
  - B Ross 
  - C Cobb
  - D Amberlink
- 1.10 The main function of pulmonary circulation is to ...
- A serve as the breathing system.
  - B transport blood enriched with oxygen from the heart to parts of the body.
  - C transport blood from the heart to the lungs.
  - D collect oxygen from the lungs.

(10 × 1) [10]

## QUESTION 2

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




- 2.1 A dual-purpose chicken breed is kept for both meat and egg production.
- 2.2 Proteins are made up of carbon, hydrogen and nitrogen. 
- 2.3 Synovial fluid helps to lubricate and protect bones.
- 2.4 Newcastle disease is a contagious disease that affects chickens, geese, turkeys and ducks.
- 2.5 Indigenous goat breeds can survive on the poorest vegetation.
- 2.6 Roughage has a high percentage of digestible nutrients.
- 2.7 The cardiac muscles are attached to bones and cause various parts of the skeletal system to move. 

- 2.8 The ovary and oviduct forms part of a chicken's reproductive system.
- 2.9 The crop is very distensible, and chickens use it to produce gastric juice containing acid. 
- 2.10 The systemic circulation carries blood to and from the heart to the lungs.

(10 × 1)

**[10]****QUESTION 3**

Choose an item 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	Cells that are responsible for breaking down foreign particles and germs and protecting against infection	A	Toggenburg 
		B	small intestine
3.2	Controls the movement of blood within the heart chambers, to the heart tissues	C	renal artery
		D	lungs
3.3	Dairy goat that has erect ears and is very small, the shortest amongst all dairy breeds	E	phagocytes
3.4	Part of the digestive system responsible for the absorption of nutrients 	F	platelets
3.5	Responsible for the transportation of blood to the kidneys	G	coronary circulation
		H	bones
3.6	Protects the brain and internal organs	I	pivot
3.7	Muscles found in the walls of the heart	J	fungi
3.8	Joint that allows rotation around the axis	K	cardiac
3.9	Type of a microorganism found in the rumen	L	skeletal
3.10	Cells that form blood clots and stop bleeding		

(10 × 1)

**[10]**

**QUESTION 4**

4.1 Differentiate between the following terms:

4.1.1 *Pulmonary artery and pulmonary vein*

4.1.2 *Coronary circulation and systemic circulation*

(2 × 2) (4)

4.2 The heart has four chambers that perform different functions.

Name the FOUR heart chambers and state the function of each chamber.

(4 × 2) (8)

4.3 Describe the role of the following parts of a cardiovascular system:

4.3.1 Plasma

4.3.2 Red blood cells

4.3.3 Lymphocytes

(3 × 2) (6)

4.4 Distinguish between *cartilaginous joints* and *synovial joints*.

(2)

**[20]**

**TOTAL SECTION A: 50**

**SECTION B****QUESTION 5**

5.1 Name FOUR breeds of broilers that are currently used in the South African poultry industry. (4)

5.2 Explain THREE factors that affect the quality of day-old chicks. (3 × 2) (6)

5.3 Name SIX components of feed. (6)

5.4 State TWO disadvantages of mash as a form of feed used in feeding chickens. (2)

5.5 Name TWO sources of protein of plant origin for feeding animals. (2)

5.6 Research indicated that chicken feed in the form of pellets has several benefits.

State FIVE benefits of chicken feed pellets.

(5)

**[25]**

**QUESTION 6**

- 6.1 Explain the all-in all-out system of rearing as the best method of ensuring that chickens are not exposed to diseases. (4 × 2) (8)
- 6.2 Describe the free-rearing system of rearing chickens. (2)
- 6.3 State FIVE advantages of the battery system to a new farmer who is plans to start a poultry business. (5)
- 6.4 Discuss the following factors which determine the feed intake of chickens:
- 6.4.1 Stress
  - 6.4.2 Stocking rate
  - 6.4.3 Energy level of the diet
  - 6.4.4 Physical nature of the diet offered
  - 6.4.5 Environmental temperature (5 × 2) (10)
- [25]**

**TOTAL SECTION B: 50**


**SECTION C****QUESTION 7**

- 7.1 Read the scenario below and answer the questions.



The Kalahari Red is a red medium to large-framed lob-eared meat goat. It has a fine head, lob ears and round horns that are bent backwards.

[Source: *gadi.agric.za*]

- 7.1.1 Which product is produced by the Kalahari Red mentioned above? (1)
  - 7.1.2 Sate FIVE important traits that make the Kalahari Red outstanding. (5)
- 7.2 Name FIVE dairy producing goats used in South Africa. (5)
- 7.3 Explain the following methods of feeding goats:
- 7.3.1 Natural grazing
  - 7.3.2 Browsing
  - 7.3.3 Supplementary feeding (3 × 2) (6)

- 7.4 State FOUR disadvantages of tethering as a system of keeping goats. (4)
- 7.5 Distinguish between *extensive* and *intensive* goat farming.  (2 × 2) (4)
- [25]**

### QUESTION 8

- 8.1 Recommend ONE form of treatment for each of the following feeding problems for goats to a farmer who asked your advice:
- 8.1.1 Pulpy kidney
- 8.1.2 Bloat
- 8.1.3 Milk fever 
- 8.1.4 Acidosis
- 8.1.5 Pregnancy toxaemia (5 × 2) (10)
- 8.2 Name THREE methods that can be used to identify goats. (3)
- 8.3 State FOUR symptoms that can be observed in goats suffering from pneumonia. (4)
- 8.4 Describe the following methods/procedures used in goat farming:
- 8.4.1 Shearing
- 8.4.2 Hoof trimming
- 8.4.3 Castration  (3 × 2) (6)
- 8.5 Name TWO diseases against which goats must be vaccinated. (2)
- [25]**

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