higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

ANIMAL PRODUCTION
NQF LEVEL 2

15 November 2024

This marking guideline consists of 8 pages.

Copyright reserved

SECTION A

QUESTION 1

1.1 C
1.2 D
1.3 B
1.4 C
1.5 D
1.6 B
1.7 B
1.8 C
1.9 C
1.10 A

(10 × 1) **[10]**

QUESTION 2

2.1 True
2.2 True
2.3 False
2.4 True
2.5 False
2.6 False
2.7 False
2.8 True
2.9 False
2.10 True

(10 × 1) **[10]**

QUESTION 3

3.1 L
3.2 E
3.3 A
3.4 B
3.5 C
3.6 H
3.7 M
3.8 J
3.9 D
3.10 F

(10 × 1) **[10]**

Copyright reserved

QUESTION 4

4.1
- The correct level of calcium
- Minerals such as phosphorus
- Magnesium
- Vitamin D
- Vitamin C
- Vitamin A
- Hormones such as parathyroid
- Growth hormone
- Calcitonin (Any 6 × 1) (6)

4.2
- It transports blood that is rich in oxygen from the heart to the body.
- It transports nutrients, oxygen and water to all parts of the body.
- It transports away the carbon dioxide that the body produces.
- It performs other functions linked to specific types of blood cells like fighting infection and clotting.
- It collects waste products, such as carbon dioxide and urea, from the body tissues and organs and transports them to the excretory organs (kidneys, liver and lungs) for disposal.
- It regulates body temperature.
- It transports hormones.
- It has an immune system function.
- It maintains pH balance.
- It supports metabolic processes. (Any 8 × 1) (8)

4.3
- Red blood cells – carry oxygen from the lungs to body tissues.
- White blood cells – help fight infections and diseases.
- Platelets – involved in blood clotting. (3 × 2) (6)

[20]

TOTAL SECTION A: 50

SECTION B

QUESTION 5

5.1 5.1.1
A – Oesophagus
B – Crop
C – Liver
D – Small intestines
E – Gall bladder
F – Proventriculus
G – Gizzard
H – Large intestine
I – Cloaca
J – Caecum/caeca (10)

5.1.2
- Stores food temporarily
- Softens food with saliva (2 × 2) (4)

5.1.3
- Mechanically grinds and mixes food with digestive enzymes
- Breaks down tough plant material into mash (2 × 2) (4)

5.1.4
- Absorbs nutrients into the blood stream
- Digests/Emulsifies fats
- Extracts water
- Pushes food down the gastrointestinal tract
- Receives bile from the liver (Any 2 × 2) (4)

5.2
- There is no penetration during mating.
- The female inverts her cloaca.
- The hen's cloaca makes contact with the cock/male's cloaca.
- The cloaca receives the sperm from the cock for fertilisation to occur in the oviduct. (4 × 2) (8)

[30]

QUESTION 6

6.1
- Shaver Starcross
- Babcock
- Ross Brown
- Hy-Line Brown
- Amberlink (Any 4 × 1) (4)

6.2
- The reserve of nutrients in the chick's yolk sac
- The storage of eggs
- The incubation conditions
- The temperature and humidity in the hatchery
- The immunity it has received from its parent through the egg
- The genetic potential of the breed (3 × 2) (6)

Copyright reserved

6.3
- Reduced feed wastage
- Better disease control
- The eggs produced in this system are clean
- The birds can be culled easily
- Reduced labour costs
- Enhanced biosecurity
- Easy to prevent the birds from getting broody
- Birds lay larger number of clean eggs
- Easy management of the chickens
- Better egg quality
- Chickens do not eat their eggs (Any 4 × 1) (4)

6.4
- Water is necessary for transporting nutrients in the body.
- It is a medium by which chemical reactions of the body occur.
- Water absorbs heat from reactions that produce energy, and this helps to regulate body temperature.
- It provides a cushioning effect for the nervous system in the form of cerebrospinal fluid.
- Access to clean water is essential for birds' survival, growth and productivity.
- Clean water helps prevent disease and reduces the risk of waterborne pathogens such as bacteria, viruses and parasites.
- Water is necessary for proper digestion and nutrient absorption.
- Birds use water to regulate their body temperature, especially in hot climates.
- Clean water is necessary for cleaning and sanitising equipment, facilities and feeding and drinking systems.
- Clean water is essential for egg production, as it affects egg quality, size and shell quality.
- Clean water affects the quality of meat, as it influences birds' health and growth.
- Access to clean water reduces bird mortality rates.
- Clean water ensures proper digestion, leading to improved feed efficiency.

(Any 6 × 1) (6)
[20]

TOTAL SECTION B: 50

SECTION C

QUESTION 7

7.1
- Alpines
- Lamanchas
- Nubians (Anglo-Nubians)
- Oberhaslis
- Toggenburgs
- Saanens (Any 4 × 1) (4)

7.2
- Alpine goats are a popular choice due to their high milk production, with an average of approximately 1,225 kg of milk per lactation.
- The milk of Alpine goats has a desirable composition, with 3,3% fat and 2,9% protein, making it suitable for cheese production and other dairy products.
- Alpine goats are known for their friendly and curious nature, making them easier to handle and manage.
- Alpine goats are a hardy breed; adapts to a variety of climates and management systems, which makes them a popular choice for dairy farmers.
- Alpine goats have a high reproductive rate, with an average of two to three kids per litter.
- Alpine kids have a fast growth rate, which allows them to reach breeding age quickly and enter the herd sooner.
- They are known to have a strong immune system, which can help reduce the incidence of diseases and the need for veterinary care.
- Alpine goats do well in tropical countries on rough pastures.
- Alpine goats have a long lifespan; they can live for 10 years, still producing good quality milk. (Any 8 × 1) (8)

7.3
- Separate the infected goat from the rest of the herd to prevent the spread of the disease.
- Clean the affected hoof thoroughly, and trim the hoof to remove any dead tissue or debris.
- Use a knife to cut away the loose part on the hoof.
- Apply a topical antibiotic or antiseptic solution, such as ox tetracycline iodine, to the affected area.
- If the infection is severe, administer antibiotics orally or through injection, as prescribed by a veterinarian.
- Offer pain relief medication.
- Ensure that the affected hoof remains clean and dry to prevent further bacterial growth.
- Vaccinate the entire herd against foot rot to prevent future outbreaks.
- Ensure that all handlers wear protective gloves and wash their hands after handling the infected goat. (Any 8 × 1) (8)

Copyright reserved

7.4
- Regularly wash hands with soap and water after handling or treating goats.
- Make sure that the faeces of goats, birds, cats and dogs do not contaminate feed and water.
- Make sure that rats are not a problem.
- Quarantine and isolate or treat sick goats without delay.
- Keep new animals on the farm in a separate place until you can determine whether they are sick or not.
- Regularly clean and disinfect equipment, utensils and living areas.
- Dispose of animal waste, dead animals and contaminated materials.
- Wear gloves, masks and protective clothing when handling animals and their waste.
- Monitor animal health regularly and seek veterinary care when necessary.
- Implement biosecurity measures such as controlling visitor access and movement on the farm.
- Educate farmers, handlers and visitors on good hygienic practices and disease prevention. (Any 10 × 1) (10)

[30]

QUESTION 8

8.1 8.1.1 Subsistence farming: Producing goats to feed the family and only if there is surplus, it can be sold.✓✓

Extensive farming: Much land is required with less equipment and production resources.✓✓ (4)

8.1.2 Intensive farming: Farming that focuses on investing lots of resources and labour to increase production.✓✓

Semi-intensive farming: A farming system which combines both intensive and extensive systems of keeping goats with limited grazing time and providing supplementary feeding.✓✓ (4)

8.2 8.2.1 Refers to the measures taken to prevent the introduction and spreading of diseases, parasites and pests that can harm animal health, productivity and welfare

8.2.2 The administration of a vaccine to stimulate an immune response in an individual animal, providing protection against specific diseases or pathogens

8.2.3 A condition in which gases build up in the rumen, causing the rumen to expand and put pressure on the diaphragm and lungs, which can lead to difficulty breathing, pain and even death.

(3 × 2) (6)

Copyright reserved

8.3
- Get the goat into a milking stand.
- Secure the goat in the stanchion with some grain/feeds to eat.
- Wash your hands.
- Clean the udder and teats with warm water and soap or sanitiser with milk check teat wipes.
- Dry the udder with clean paper towel.
- Sanitise the teats after milking with teat dip. (6 × 1) (6)

[20]

TOTAL SECTION C: 50
GRAND TOTAL: 150

Copyright reserved