



**higher education  
& training**

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

# **MARKING GUIDELINE**

**NATIONAL CERTIFICATE (VOCATIONAL)**

**ANIMAL PRODUCTION  
NQF LEVEL 3**

**XX February 2020**

**This marking guideline consists of 6 pages.**

**SECTION A****QUESTION 1**

- |     |        |   |          |      |
|-----|--------|---|----------|------|
| 1.1 | 1.1.1  | C |          |      |
|     | 1.1.2  | B |          |      |
|     | 1.1.3  | C |          |      |
|     | 1.1.4  | D |          |      |
|     | 1.1.5  | B |          |      |
|     | 1.1.6  | A |          |      |
|     | 1.1.7  | B |          |      |
|     | 1.1.8  | B |          |      |
|     | 1.1.9  | A |          |      |
|     | 1.1.10 | A |          |      |
|     |        |   | (10 × 1) | (10) |
- 
- |     |        |   |          |      |
|-----|--------|---|----------|------|
| 1.2 | 1.2.1  | D |          |      |
|     | 1.2.2  | F |          |      |
|     | 1.2.3  | A |          |      |
|     | 1.2.4  | H |          |      |
|     | 1.2.5  | G |          |      |
|     | 1.2.6  | K |          |      |
|     | 1.2.7  | I |          |      |
|     | 1.2.8  | L |          |      |
|     | 1.2.9  | C |          |      |
|     | 1.2.10 | E |          |      |
|     |        |   | (10 × 1) | (10) |
- 
- |     |        |       |          |      |
|-----|--------|-------|----------|------|
| 1.3 | 1.3.1  | True  |          |      |
|     | 1.3.2  | True  |          |      |
|     | 1.3.3  | True  |          |      |
|     | 1.3.4  | True  |          |      |
|     | 1.3.5  | True  |          |      |
|     | 1.3.6  | True  |          |      |
|     | 1.3.7  | False |          |      |
|     | 1.3.8  | True  |          |      |
|     | 1.3.9  | False |          |      |
|     | 1.3.10 | False |          |      |
|     |        |       | (10 × 1) | (10) |
- 
- |     |   |  |  |      |
|-----|---|--|--|------|
| 1.4 | The light rays from the object viewed by the animal pass through the cornea,✓ aqueous humour,✓ lens✓ and vitreous humour✓ to the retina.✓ The lens is responsible for focusing light onto the retina.✓ Light that enters the eye from the object that is being viewed is focused by the lens to form a sharp image on the retina.✓ Muscles in the ciliary body are attached to the lens.✓ When the eye views a distant object, the ciliary muscles are relaxed and the lens forms a flat disc shape.✓ When the eye views a nearby object, the ciliary muscles contract to pull the lens into a bulge or a round shape.✓ |  |  | (10) |
|-----|---|--|--|------|

- 1.5
- The liver controls glucose levels in the body✓ through hormones✓
  - These hormones are insulin✓ and glucagon secreted by the islets of Langerhans in the pancreas✓
  - Insulin lowers the amount of glucose in the blood,✓ and glucagon raises the level of glucose✓
  - When the level of glucose rises in the blood,✓ insulin secretion increases and glucagon secretion decreases✓
  - These changes bring about a drop in the level of glucose, taking it back to the correct level✓
  - When the glucose level in the blood is too low, the secretion of insulin decreases✓ and the secretion of glucagon increases to correct the level✓
- (Any 5 × 2) (10)  
**[50]**
- TOTAL SECTION A: 50**

**SECTION B****QUESTION 2**

- 2.1      2.1.1      Black-headed Persian✓ and Dorset horn✓ (2)
- 2.1.2      • High fertility rates
- Good mothering ability
- Lambs grow fast
- High weaning weight
- Rams are sexually active (Good libido) (5)
- 2.2      • The sheep should be able to produce lambs that must be ready for slaughtering quickly and for marketing at the lowest possible cost.
- Lambs should be ready for slaughter as soon as they are weaned (2 × 2) (4)
- 2.3      Demarcation of camps helps to utilise the veld effectively. (2)
- 2.4      • Veld types with the same potential and grazing palatability should be fenced together.
- Smaller portions of less palatable veld should be fenced in with larger portions of more palatable veld.
- Vulnerable veld must be fenced together with less vulnerable veld.
- The camps must not be too large and should be determined by its carrying capacity.
- Different veld types must be fenced separately.
- Camps grouped together should be representative of veld types on the farm. (6 × 2) (12)  
**[25]**

**QUESTION 3**

- 3.1
- Flies, midges and mosquitos must be eradicated in breeding places before they reach an adult stage.
  - Blowflies can be controlled by breeding sheep which are broad, and have smooth structure in the crotch.
  - Lice and ticks can be controlled through the use of pesticides used as dips or sprays. (3 × 2) (6)
- 3.2
- Blowfly
  - Nose worm
  - Lice
  - Ticks (4)
- 3.3
- Sheep should be loaded onto transport using a ramp or a raising loading bay✓✓
  - The angle of the ramp should not be too steep✓ and any gap between the truck and the ramp should be covered to avoid injuries✓ (4)
- 3.4
- Ear tags
  - Ear notches
  - Tattooing
  - Branding (4)
- 3.5
- Production performance
  - Conformation
  - Fleece properties
  - Fertility
  - Breeding potential
  - Type (Any 4 × 1) (4)
- 3.6
- Cross-bred animals are, in general, not suited for breeding.
  - Hereditary defects are hidden and may appear again in later generations.
  - Offspring are variable and less uniform in certain desired traits. (3)

**[25]****TOTAL SECTION B: 50**

**SECTION C****QUESTION 4**

- 4.1
- It can survive and produce under extensive conditions,
  - It can be fed on kitchen waste,
  - It is disease resistant,
  - It is relatively resistant to external parasites, (4 × 2) (8)
- 4.2
- Good length, fine head, neck and shoulders
  - Well-fleshed, full hams
  - Good mothering ability
  - Economically good converters
  - Evenly distributed fat
  - High fertility (Any 4 × 1) (4)
- 4.3
- 4.3.1
- Dry sows should never be too fat.✓
  - They must be fed in such a way that they will remain healthy and strong.✓
  - Small grazing camps provide suitable grazing,✓ especially fresh lucerne with small quantities of concentrate.✓
  - 2 kg of balanced concentrate per day is needed if they are not receiving any food in the form of grazing.✓ (5)
- 4.3.2
- Boars should never be too fat.
  - They must be fed in such a way that they will remain healthy and strong.
  - Regular exercise is required in small camp covered with a roof for shade.
  - Small grazing camps or green fodder if available is ideal,
  - 2 kg to 3 kg of balanced concentrate per day is needed if they are not receiving any food in the form of grazing. (5)
- 4.4
- Colostrum provides maternal antibodies, energy and protein required by piglets to grow. (1)
- 4.5
- Piglets are born with a limited supply of iron which is usually used as they grow.
  - Provision of iron helps to prevent anaemia. (2)
- [25]**

**QUESTION 5**

- 5.1
- The boar house should be constructed in such a way that it will be cool in summer.
  - The floor must not be slippery so that boars cannot get injured.
  - The house should be situated in such a way that it is easy to serve sows.
  - Boars must be kept within sight, sound and smell of the sows.
  - The smell, sight and sound of a boar helps to bring sows into season quickly.
  - Boars need an exercise area to keep fit and healthy, (5)
- 5.2
- 5.2.1
- Fosters uniform families because it increases hereditary powers
  - Helps to uncover genes that produces abnormalities or death
  - Maintains a close relationship between successive generations and superior ancestors
  - Maintenance of desired traits and type
  - Encourages prepotency (5)
- 5.2.2
- Maternal heterosis (hybrid vigour)
  - Better adaptability
  - Usually produces better maternal instincts
  - Maintenance of desired traits and type
  - Encourages prepotency (Any 2 × 1) (2)
- 5.3
- Tape worm
  - Ascaris worm (2)
- 5.4
- Still birth
  - Embryonic death
  - Infertility
  - Abortion (4)
- 5.5
- Reduces the risk of piglet mortality
  - Considered economical, efficient and safe
  - Saves space (3)
- 5.6
- Control rodents.
  - Eliminate/Isolate sows carrying the disease.
  - Maintain buildings by repairing cracks in floors.
  - Vaccinate all pigs at weaning age.
  - Vaccinate all sows after each breeding cycle. (Any 4 × 1) (4)

**[25]**

**TOTAL SECTION B: 50**  
**GRAND TOTAL: 150**