higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

ANIMAL PRODUCTION
NQF LEVEL 3

18 February 2025

This marking guideline consists of 7 pages.

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SECTION A

QUESTION 1

1.1	1.1.1	C
	1.1.2	A
	1.1.3	A
	1.1.4	D
	1.1.5	B
	1.1.6	A
	1.1.7	B
	1.1.8	A
	1.1.9	D
	1.1.10	A

(10 × 1) (10)

1.2	1.2.1	True
	1.2.2	True
	1.2.3	False
	1.2.4	True
	1.2.5	False
	1.2.6	True
	1.2.7	True
	1.2.8	True
	1.2.9	True
	1.2.10	False

(10 × 1) (10)

1.3	1.3.1	A
	1.3.2	D
	1.3.3	F
	1.3.4	C
	1.3.5	I
	1.3.6	J
	1.3.7	B
	1.3.8	G
	1.3.9	E
	1.3.10	H

(10 × 1) (10)
[30]

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QUESTION 2

2.1
- Ultra-filtration takes place in the Bowman's capsule.
- Blood is transported to each glomerulus by an afferent arteriole which is a branch of the renal artery. The walls of the glomerular capillaries contain many small holes or pores.
- These pores are large enough to let through the smaller particles found in blood, including ions, glucose, and amino acids.
- The pores are too small to let through larger particles such as proteins and blood vessels.
- So, the glomeruli act like a filter and a liquid called the glomerular filtrate collects in each Bowman's capsule.
- The glomerular filtrate contains all the substances from the blood, except for the large plasma proteins and the blood cells.
- The glomerular filtrate contains both waste products and useful substances like glucose, amino acids and water.
- The filtration process is made possible because the filtrate is forced through the glomerular walls under pressure.
- The pressure is caused by the difference in diameter of the blood vessels.
- This 'bottleneck effect' leads to high blood pressure in the glomerular capillaries.
- The high pressure forces the smaller constituents of the blood into the capsular space. (11)

2.2
- Help them to steer
- and brake during flight.
- They also protect the bird from bad weather conditions.

(Any 2 × 1) (2)

2.3
- Remove waste products from the blood
- Urine production (2 × 1) (2)

2.4
- Wool and mohair – Make clothing and carpets.
- Hides - produce leather.
- Bristles - produce bristles in brushes.
- Feathers - filling pillows, duvets and sleeping bags and jackets.
- Produce dusters and fashion clothes. (5)

[20]

TOTAL SECTION A: 50

SECTION B

QUESTION 3

3.1 Carrying capacity refers to the number of animals that can feed off a piece of land✓ without destroying all the vegetation.✓ (2)

3.2
- have large-framed body,
- has high fertility
- It is very hardy
- Long breeding season
- can produce good quality fat-lamb at any time of year
- excellent maternal qualities
- excellent carcass quality
- heat and insect tolerance

(Any 6 × 1) (6)

3.3
- The number of sheep on the farm.
- The size of the farm.
- The number of labourers who can handle the sheep.

(Any 2 × 1) (2)

3.4
- The legs must be strong, straight, wide apart and in proportion to the body.
- The joints must be firm
- The hoofs strong and amber-coloured.
- The hair of the lower parts of the legs should be short and cream-coloured. (4)

3.5
- The inherent grazing capacity of the veld.
- If the grazing capacity is high, the stocking intensity will also be high.
- The veld types and conditions.
- A better type or the condition, the higher the stocking intensity.
- Time of the year.
- stocking intensity should be reduced during early summer when the quantity of herbage is limited. (6)

3.6
- Treatment
- Transportation
- Breeding
- Castration
- Tail docking
- Hoof clipping
- Shearing (Any 5 × 1) (5)

[25]

QUESTION 4

4.1
- Sheep blowfly
- Nose worms
- Lice
- Ticks
- Mites (5)

4.2
- The rest period allows grasses to grow taller✓ and more nutritious.✓
- Reduce risk of disease.✓
- Enhance biodiversity.✓
- Reduce environmental impact.✓
- Maximum production of grazing material.✓
- promote seeding✓ and establishment of young plants.✓
- Enhance root development✓ and the recovery of plants after grazing.✓ (10)

4.3
- Intake of infected feed.✓
- Breathing infected air.✓
- Open wounds which are exposed to infected air✓ or meet infected surface.✓
- Penetration of infected material into the eye, sexual canal✓ or other body opening.✓ (6)

4.4
- Ear notches
- Metal ear tag
- Plastic ear tag
- Tattooing
- Branding (Any 4 × 1) (4)

[25]

SECTION C

QUESTION 5

5.1 A gilt is an unmated female pig.✓✓ (2)

5.2
- Good environmental control
- Proper ventilation to ensure enough fresh air
- Minimum labour requirement
- It should be warm, dry, draught-free conditions
- Floor must be rough and not slippery
- Easy availability of feed and water
- Durable materials should be used (Any 5 × 1) (5)

5.3
- The efficiency of feed conversion
- Growth rate
- Carcass quality
- Fertility
- Mothering ability
- Temperament
- Size
- Foraging ability
- Meat flavour (Any 5 × 1) (5)

5.4
- The hind-quarter must be well-filled-✓ broad, wide with a good depth down to the heels.✓
- The loins must be broad✓ and blend smoothly with the back.✓
- The top line must be straight✓ and parallel with the bottom line.✓
- The shoulders and neck must be lightly fleshed.✓ (7)

5.5
- Upgrading
- Inbreeding
- Line-breeding
- Cross-breeding (4)

5.6 A crate is used to confine the sow during✓, and for a few days after, farrowing.✓ (1 × 2) (2)

[25]

QUESTION 6

6.1
- Under conditions of stress caused by draughts,✓ the bacteria that cause colibacillosis may multiply rapidly.✓
- Cold, damp, poorly ventilated houses✓ and sties promote colibacillosis.✓
- Moist, humid conditions promote✓ grease pig disease.✓
- Moist, shady surroundings✓ promote leptospirosis.✓
- Stress in the form of draughts✓ promote swine erysipelas.✓ (5 × 2) (10)

6.2
- It should be built in such a way that it is cool in summer.✓
- The floor must not be too slippery✓ as the boar can injure himself if he happens to slip.✓
- It should be situated in such a way that it is within easy to reach✓ when sows are served.✓
- The boars should be kept within sight, sound, and smell of sows.✓
- The smell, Sight and sound of boar helps to bring the females into season quickly.✓
- Boar pens should have an area of about seven✓ to eight square metres✓ for doing exercises.✓ (10)

6.3
- Colibacillosis
- Swine erysipelas (diamond skin disease)
- Greasy pig disease
- Leptospirosis
- Parvovirus
- Anaemia
- African swine fever (Any 5 × 1) (5)

[25]

TOTAL SECTION C: 50
GRAND TOTAL: 150

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