higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

FARM PLANNING AND MECHANISATION
NQF LEVEL 4

20 November 2024

This marking guideline consists of 6 pages.

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SECTION A

QUESTION 1

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

(10 × 1) (10)

1.2	1.2.1	F
	1.2.2	H
	1.2.3	A
	1.2.4	B
	1.2.5	D
	1.2.6	K
	1.2.7	E
	1.2.8	I
	1.2.9	L
	1.2.10	C

(10 × 1) (10)

1.3	1.3.1	False
	1.3.2	True
	1.3.3	False
	1.3.4	True
	1.3.5	True
	1.3.6	False
	1.3.7	True
	1.3.8	False
	1.3.9	False
	1.3.10	True

(10 × 1) (10)

1.4	1.4.1	Holding
	1.4.2	Sweet veld
	1.4.3	Orchard
	1.4.4	Crush
	1.4.5	Weeds
	1.4.6	Insecticides
	1.4.7	Predators
	1.4.8	Green manure
	1.4.9	Drip irrigation
	1.4.10	Farm gate

(10 × 1) (10)
[40]

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QUESTION 2

2.1 2.1.1 Monoculture is the practice of planting the same type of crop on the same piece of land year after year.

2.1.2 Pasturage is a piece of land covered in grass or any other edible vegetation suitable for grazing.

2.1.3 A catchment area is an area of land over which rainfall water runs into and empties into a river system.

(3 × 2) (6)

2.2 Farmers continue to practice monoculture on some areas because of a processing factory nearby.✓✓ They will also continue with monoculture because of a nearby market.✓✓ Monoculture is prevalent among wealthy farmers paying to produce the crop.✓✓ Farmers will also go for the same crop because they get support from the state or authorities of the area to produce that crop.✓✓

(Any 2 × 2) (4)

2.3
- The soil must be deep
- The soil should be fertile
- The soil should be well drained
- The salt content should not be too high (4)

2.4 When one wants to farm on dry land, one must ensure that the soil on that land is deep as deep soils retains more water.✓✓ The soil of that land should at least be sandy loam as such soil absorbs water better and makes it more readily available for plants.✓✓ Must ensure that weeds are always kept under control as weeds use more water than crops.✓✓ The crops that need less water should be planted under this system.✓✓

(Any 3 × 2) (6)
[20]

QUESTION 3

3.1
- There should be enough room for building on the farm
- The buildings must be functional, in other words, they must be useful rather than attractive
- They must be sturdy
- They must be built on a solid foundation
- They must be made of good quality material
- The site should be well drained (Any 4 × 1) (4)

3.2 3.2.1 Cattle dip will be needed in order to treat the livestock against external parasites.

3.2.2 Spray race will be needed in order to control tick-borne diseases on livestock.

(2 × 2) (4)

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3.3 The system of land use - consider natural factors like rainfall, topography, percentage of arable to decide on which system to use, i.e. an intensive or extensive system or even semi-intensive or semi-extensive.✓✓
The land capability classification - this looks at what the land can produce sustainably and economically.✓✓
Land potential assessment - this looks not only at the slope and soil, but also the climate conditions of the area, so that the land can be divided based on differences in potential, starting from no potential to good potential.✓✓ (6)

3.4 Mixed farming is referred to as a combination of farming practises. Farming with cash crops, livestock feed and animals on the same farm to have more than one source of income. ✓✓ (4)
Mixed farming can also be seen as diversification where farmers usually farm with a variety of crops and livestock, to be more profitable.
For example, growing crops and raising livestock on the same farm. ✓✓

3.5
- To plant drought resistant cultivars.
- Make use of minimum tillage or cultivation practises that conserves soil moisture.
- To make use of a suitable crop rotation system.
- Consider timing of planting.
- Mulching and the use of cover crops.

Any (4 × 1) (4)

3.6 3.6.1 Browser is an animal that eat more leaves than grass and broiler is type of chicken that produce meat.

3.6.2 Rumen is a compartment in animal stomach and ruminant is the type of animal that chew cud.

(2 × 2) (4)

3.7 It is critical for a farmer to determine whether the route to the market is direct or indirect.✓✓ An indirect route will add extra costs to the farmer when taking their product to the market. In addition to that, bad road surfaces can damage the tires of the transporting vehicles.✓✓ Besides the damage, on bad roads the transport will be unable to move quickly and will take more time to reach the market thus causing delays in delivery.✓✓ (Any 2 × 2) (4)

[30]

TOTAL SECTION A: 90

SECTION B

QUESTION 4

4.1
- Tilling the soil
- Transportation
- Weeding of cropped fields
- Animals used in construction of roads and dams (Pulling of implements)
- To turn some heavy machines. For example, the functioning of water wells.

(5 × 1) (5)

4.2
- Unsuitable or No potential
- Low potential
- Medium potential
- High potential (4)

4.3
- Basic Conditions of Employment Act of 2001
- Unemployment Insurance Act no.63 of 2001
- Labour Relation Act
- Labour Tenant Act
- Extension of Security of Tenure Act of 1997 (5)

4.4 Harnessing✓ and Hitching points✓ (2)

4.5 When harnessing does not fit well or is made incorrectly, it will wound the animals.✓✓ If the hitching points are incorrectly made, they will work against the animal and be unable to move straight and tandem.✓✓ (4)

[20]

QUESTION 5

5.1 5.1.1 Wheeled-model tractor is the type of tractor with two big back and two small front wheels used in farming operations.

5.1.2 Tracked-model tractor is the type of tractor with chain like wheels, also known as a caterpillar.

5.1.3 Front-end loader is the type of tractor mostly used in construction with a front-loading bucket.

5.1.4 Back-end loader is the type of tractor mostly used in construction with a back-loading bucket.

(4 × 2) (8)

5.2 5.2.1 Power stroke
5.2.2 Intake stroke
5.2.3 Exhaust stroke
5.2.4 Compression stroke

(4 × 1) (4)

5.3 Oil bath air filter✓ and dry type air filter✓ (2)

5.4 Oil bath air filter purifies the air so that only clean air can enter the combustion.✓✓ The dry type air filter holds the dusts and allow clean air to enter the cylinder.✓✓ (4)

5.5 Power take off turns the hitched machine or implement when it is used on land, e.g. slashers etc. (2)
[20]

QUESTION 6

6.1 6.1.1 Radiator (1)

6.1.2
1 – clamp
2 – radiator
3 – shroud fan
4 – radiator cap
5 – drain cock
6 – washer
7 – overflow tube
8 – radiator label
9 – lower water hose pipe
10 – upper water hose pipe (10)

6.1.3 Its function is to remove water from the radiator when emptied during service. (2)

6.2
- Top linkage
- Left arm linkage
- Right arm linkage (3)

6.3 Its function is to hook the implement when it is to be used. It is also used to lift or lower the implement when it is moved from one place to another. (4)
[20]

TOTAL SECTION B: 60
GRAND TOTAL: 150

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