



education

Department:
Education
PROVINCE OF KWAZULU-NATAL

LIFE SCIENCES

MARKING GUIDELINE

SEPTEMBER 2019

**NATIONAL
SENIOR CERTIFICATE**

GRADE 10

MARKS: 60

This marking guideline consists of 5 pages.

SECTION A**QUESTION 1**

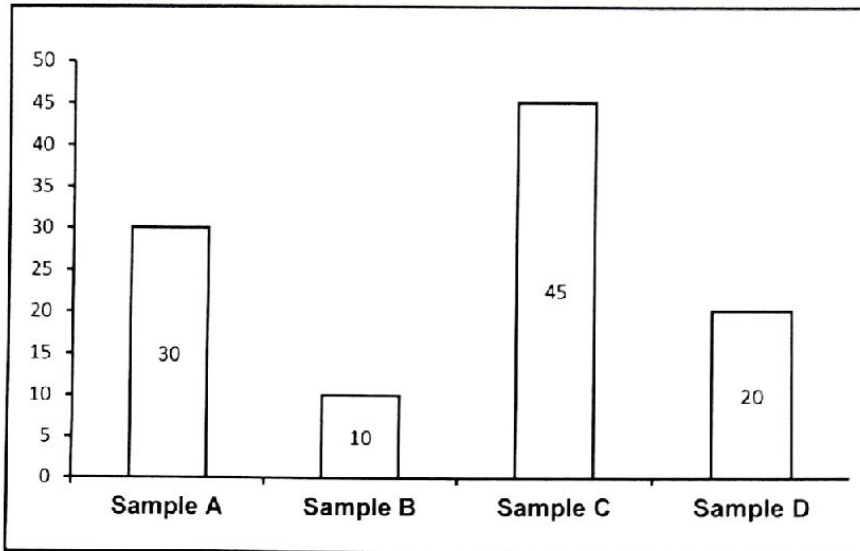
1.1	1.1.1	D✓✓		
	1.1.2	B✓✓		
	1.1.3	A✓✓		
			(3 x 2)	(6)
1.2	1.2.1	Xerophytes ✓		
	1.2.2	Biome✓		
	1.2.3	Eukaryotes✓		
	1.2.4	Animalia✓		
			(4 x 1)	(4)
			TOTAL SECTION A:	10

SECTION B**QUESTION 2**

2.1	2.1.1	Food web ✓		(1)
	2.1.2	Energy flow ✓/ shows which organism feeds on another		(1)
	2.1.3	(a) Lion✓ / Hyena/hawk		(1)
		(b) Rabbit ✓/ Impala / Buffalo		(1)
	2.1.4	It feeds on Rabbits✓ and Buffalo ✓		(2)
	2.1.5	Hawk ✓		(1)
	2.1.6	Feeds only on Rabbits✓ / No other food source for Hawk on this food web.		(1)
	2.1.7	Number of Hyenas will increase✓ due to more food available to them ✓/ less competition for food from Lions		(2)
				(10)

2.2	2.2.1	Carolus Linnaeus ✓		(1)
	2.2.2	(a) Genus ✓ / Genera		(1)
		(b) Species ✓		(1)
	2.2.3	Common characteristics ✓ / features		(1)
	2.2.4	Mammalia ✓ / mammals		(1)
				(5)
				[15]
3.1	3.1.1	-Decide on the sample size ✓ -Decide on how to record results ✓ -Decide on apparatus to be used ✓ -Decide on duration of the investigation ✓ -Decide on the method to be used ✓ -decide on the age of the plants to be used ✓	Any	(2)
	3.1.2	Plant type ✓		(1)
	3.1.3	Plant type C ✓		(1)
	3.1.4	-Same amount of water ✓ -Same temperature ✓ -Same duration of investigation ✓ -same species of plant ✓ -same amount of light ✓	Any	(1)

3.1.5 Bar graph showing the effect of alkaline pH on root growth of plant Type



Rubric for marking Graph

	Mark allocation
Correct type of graph	1
Correct caption for graph	1
Correct label on X and Y axis	1
Correct scale on x and y axis	1
Plotting of bars	1 (1 to 2 bars)
	2 (all 4 bars)

Note: if the wrong graph is drawn, marks will be lost for correct type of graph. If axes are transposed, marks will be lost for labelling of X-axis and Y-axis.

(6)
(11)

3.2 3.2.1 Radiation ✓ /wind velocity

(1)

3.2.2 Rapid surface runoff ✓/soil erosion/ soil degradation.

(1)

3.2.3 - South-facing side receives less solar radiation ✓ /sun
- Will therefore be cooler ✓/loses less water / there will be less transpiration/ evaporation compared to North-facing side.

Any (2)
(4)

TOTAL SECTION B:

(15)
30

SECTION C**Question 4****Water cycle (W)**

- water evaporates from the oceans ✓ / rivers / dams / lakes
- water vapour leaves plants through transpiration ✓
- the water vapour rises ✓ and condenses ✓ to form clouds ✓
- precipitation falls as rain ✓ / hail / snow / ice / dew /
- Water runs into streams ✓ / rivers / lakes / oceans
- Then evaporation takes places all over again ✓

(Any 7) (7)**Oxygen cycle (O)**

- Living organisms take in oxygen ✓ during respiration ✓
- And they release carbon dioxide ✓ into the atmosphere
- Plants use / take in carbon dioxide ✓ for photosynthesis ✓
- Plants release oxygen ✓ as a by-product of photosynthesis **(Any 5) (5)**

Ecotourism (E)

- People can visit protected areas ✓ / relatively unexplored natural areas
- without causing any damage ✓ or change to the area
- Gives local communities financial benefits ✓ / creates jobs for local people
- Allows local people to use natural resources in the ecotourism area ✓
- Gives awareness to local communities ✓ on the need to conserve their natural resources ✓
- Can earn foreign currency for the country ✓ **(Any 5) (5)**

ASSESSING THE PRESENTATION OF THE ESSAY

Relevance	Logic sequence	Comprehensive
All information provided is relevant to the question	Ideas arranged in a logical cause-effect sequence	Answered all aspects required by the essay in sufficient detail
All the information provided is relevant to the water cycle, Oxygen cycle and ecotourism	All the information regarding the water cycle, oxygen cycle and ecotourism is arranged in a logical manner.	At least the following points should be obtained: water cycle: 5/7. Oxygen cycle: 3/5 Ecotourism: 3/5
1 mark	1 mark	1 mark

TOTAL SECTION C: 20
GRAND TOTAL: 60