

FINAL



KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

**PROVINCIAL
STANDARDISED ASSESSMENT**

GRADE 11

LIFE SCIENCES

SEPTEMBER 2026

MARKING GUIDELINES

MARKS: 100

This marking guideline consists of 7 pages including this page.

PRINCIPLES RELATED TO MARKING LIFE SCIENCES SEPTEMBER 2026

1. **If more information than marks allocated is given**
Stop marking when maximum marks are reached and put a wavy line and 'max' in the right-hand margin.
2. **If, for example, three reasons are required and five are given**
Mark the first three irrespective of whether all or some are correct/incorrect.
3. **If whole process is given when only part of it is required**
Read all and credit relevant part.
4. **If comparisons are asked for and descriptions are given**
Accept if differences / similarities are clear.
5. **If tabulation is required but paragraphs are given**
Candidates will lose marks for not tabulating.
6. **If diagrams are given with annotations when descriptions are required**
Candidates will lose marks
7. **If flow charts are given instead of descriptions**
Candidates will lose marks.
8. **If sequence is muddled and links do not make sense**
Where sequence and links are correct, credit. Where sequence and links are incorrect, do not credit. If sequence and links become correct again, resume credit.
9. **Non-recognised abbreviations**
Accept if first defined in answer. If not defined, do not credit the unrecognized abbreviation but credit the rest of answer if correct.
10. **Wrong numbering**
If answer fits into the correct sequence of questions but the wrong number is given, it is acceptable.
11. **If language used changes the intended meaning**
Do not accept.
12. **Spelling errors**
If recognizable accept provided it does not mean something else in Life Sciences or if it is out of context.

13. **If common names given in terminology**
Accept provided it was accepted at the National memo discussion meeting.
14. **If only letter is asked for and only name is given (and vice versa)**
No credit
15. **If units are not given in measurements**
Candidates will lose marks. Memorandum will allocate marks for units separately
16. Be sensitive to the **sense of an answer, which may be stated in a different way.**
17. **Caption**
All illustrations (diagrams, graphs, tables, etc.) must have a caption
18. **Code-switching of official languages (terms and concepts)**
A single word or two that appears in any official language other than the learners' assessment language used to the greatest extent in his/her answers should be credited, if it is correct. A marker that is proficient in the relevant official language should be consulted. This is applicable to all official languages.

SECTION A**QUESTION 1**

- | | | | | |
|-----|-------|---|---------|-------------|
| 1.1 | 1.1.1 | B✓✓ | | |
| | 1.1.2 | C✓✓ | | |
| | 1.1.3 | A✓✓ | | |
| | 1.1.4 | D✓✓ | | |
| | 1.1.5 | B✓✓ | | |
| | 1.1.6 | C✓✓ | (6 x 2) | (12) |
| 1.2 | 1.2.1 | Epiglottis✓ | | |
| | 1.2.2 | Ureter✓ | | |
| | 1.2.3 | Emigration✓ | | |
| | 1.2.4 | Ecology✓ | | |
| | 1.2.5 | Pleura✓ | | |
| | 1.2.6 | Lag✓ phase | | |
| | 1.2.7 | Excretion✓ | (7 x 1) | (7) |
| 1.3 | 1.3.1 | Both A and B✓✓ | | |
| | 1.3.2 | B only✓✓ | | |
| | 1.3.3 | Both A and B✓✓ | (3 x 2) | (6) |
| 1.4 | 1.4.1 | Squamous epithelium✓ | | (1) |
| | 1.4.2 | (a) Carbon dioxide✓ | | (1) |
| | | (b) Oxygen✓ | | (1) |
| | 1.4.3 | (a) B✓ Pulmonary vein✓ | | (2) |
| | | (b) D✓ Red blood cell✓/erythrocyte/red blood corpuscles | | (2) |
| | 1.4.4 | Diffusion✓ | | (1) |
| | | | | (8) |
| 1.5 | 1.5.1 | (a) Predator-prey✓ | | (1) |
| | | (b) Secondary consumer✓ | | (1) |
| | 1.5.2 | Carrying capacity✓ | | (1) |
| | 1.5.3 | (a) 2003✓ | | (1) |
| | | (b) 1998✓ | | (1) |
| | 1.5.4 | - Mark recapture✓ | | |
| | | - Simple sampling✓ | | (2) |
| | | (Mark first TWO only) | | (7) |

TOTAL SECTION A: 40

SECTION B**QUESTION 2**

- 2.1 2.1.1 - Group of organisms of the same species✓
- living together in a same habitat✓
- at the same time✓ (3)
- 2.1.2 (a) - Increased poaching✓
- Competition for territory✓
(Mark first ONE only) Any (1)
- (b) - Maintain grasslands✓
- Support the biodiversity✓
(Mark first ONE only) Any (1)
- 2.1.3 - Interspecific✓competition
- Intraspecific✓competition (2)
(Mark first TWO only)
- 2.1.4 $P = \frac{M \times S}{T}$
 $= \frac{10 \times 20}{5}$ ✓
 $= 40$ ✓ Rhinos (2)
(9)
- 2.2 2.2.1 Age-gender pyramid✓ (1)
- 2.2.2 (a) Congo✓ (1)
- (b) South Africa✓ (1)
- 2.2.3 - Poor medical care✓/no advanced medical technology
- Poor nutrition✓
- Lack of education✓ Any (2)
(Mark first TWO only)
- 2.2.4 - Predict future trends/ issues to assist in future planning✓
- Proper planning for health care✓
- Planning for proper education✓
- Planning for proper housing✓ Any (2)
(7)

- 2.3 2.3.1 (a) Dehydration✓ (1)
- (b) Sodium level in the blood✓ (1)
- 2.3.2 - only 32 years old✓ were used
- only males✓ were used (2)
(Mark first TWO only)
- 2.3.3 - Receptor cells detect the higher sodium level✓
- the adrenal glands are stimulated✓ and
- less aldosterone is secreted✓
- in the renal tubules✓
- the reabsorption of sodium is decreased✓
- into the surrounding blood capillaries✓
- more sodium is excreted✓ Any (5)
- 2.3.4 $(97 \times 1.3)✓ = 126.1✓ \text{ mg}✓$ (3)
- 2.3.5 - As a control group✓
- to show that an increase in sodium level in the blood is due to dehydration only✓
- OR**
- To show that the increase in sodium level✓ in the blood in this
- investigation is due to dehydration only and not any other factor✓ (2)
(14)
[30]

QUESTION 3

- 3.1 3.1.1 Nephron✓ (1)
- 3.1.2 (a) Podocytes✓/ endothelial cells (1)
- (b) Collecting ducts✓/tubule (1)
- 3.1.3 - Glomerular filtration✓*/ultra-filtration
- Blood enters the glomerulus through the afferent arteriole✓
- the high pressure in the glomerular capillaries forces water and small solutes✓
- through a semipermeable membrane into the Bowman's capsule✓
- forming the glomerular filtrate✓ / ultrafiltrate *1 Compulsory + Any 3 (4)

3.1.4	(a)	- Increases/creates high blood pressure✓ within the glomerulus - to force out water and solutes out of the blood✓		(2)
	(b)	- The tube is long and convoluted✓ to increase the surface for maximum reabsorption✓ - Cuboidal epithelial cells have many mitochondria✓ to provide energy✓ for active mechanism - Cuboidal epithelial cells have finger-like projections✓ which increases the absorption surface area✓	Any (2 x 2)	(4)
		(Mark first TWO only)		(13)
3.2	3.2.1	E✓ and C✓		(2)
		(Mark first TWO only)		
	3.2.2	- Diaphragm/part C contract and became flattened✓ - intercostal muscles/part E contract✓ - causing the rib cage to move upwards✓ - this increases the volume of the thoracic cavity✓ - oxygen-rich air flows into the lungs✓/inhalation occurs		(5)
	3.2.3	- Air passage/ bronchus constricts✓/is reduced - Less oxygen reaches the alveoli✓ - less diffusion of oxygen to the blood✓ - carried by pulmonary vein to the heart✓ - leading to heart failure or cardiac arrest✓/respiratory failure	Any	(4)
				(11)
3.3	3.3.1	(a) - Blood plasma✓ - Bicarbonate ions✓ - Carbohaemoglobin✓	Any	(2)
		(Mark first TWO only)		
	(b)	- Increase the sample size✓ - Repeat the investigation✓		(2)
		(Mark first TWO only)		
	3.3.2	When the carbon dioxide concentration increases the rate of breathing also increases✓✓		(2)
				(6)
				[30]
		TOTAL SECTION B:		60
		GRAND TOTAL:		100