KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

FINAL

STANDARDISED PROVINCIAL ASSESSMENT

GRADE 10

LIFE SCIENCES

MARCH 2026

MARKING GUIDELINE

Stanmorephysics.com

Marks: 75

N.B This marking guideline consist of 7 pages.

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PRINCIPLES RELATED TO MARKING LIFE SCIENCES

1. **If more information than marks allocated is given**
   Stop marking when maximum marks is 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 a part of it is required**
   Read all and credit the relevant part.

4. **If comparisons are asked for but descriptions are given**
   Accept if the 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 unrecognised abbreviation but credit the rest of the 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 recognisable, accept the answer, provided it does not mean something else in Life Sciences or if it is out of context.

13. **If common names are given in terminology**
   Accept, provided it was accepted at the national memo discussion meeting.

14. **If only the letter is asked for but only the name is given (and vice versa), DO NOT 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 appear(s) 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 D ✓✓
1.1.2 B ✓✓
1.1.3 C ✓✓
1.1.4 D ✓✓
1.1.5 A ✓✓

2X5 **(10)**

1.2 1.2.1 Centromere ✓
1.2.2 Leucoplast ✓
1.2.3 Prophase ✓
1.2.4 Arm✓
1.2.5 Tonoplast ✓

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1x5 **(5)**

1.3 1.3.1 B only✓✓
1.3.2 A only✓✓

2x2 **(4)**

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1.4 1.4.1 (a) Starch ✓ (1)
(b) Glucose✓ (1)
(c) Lipids ✓ (1)

1.4.2 (a) Bright orange✓/yellow/ orange (1)
(b) Blue-black✓/ purplish black/ black (1)

1.4.3 Millon's reagent✓Burette solution (1)
(6)

TOTAL SECTION A 25

SECTION B

QUESTION 2

2.1 2.1.1 Cancer that affects the colon and rectum ✓ (1)

2.1.2 Refers to the large growth of cells✓due to uncontrolled abnormal cell division.✓ (2)

2.1.3 - Surgery✓
- Chemotherapy✓
Mark the first TWO (2)
(5)

2.2.1 (a) Spindle fibres✓ (1)
(b) Chromatid✓ (1)

2.2.2 - Spindle fibres will not form✓
- chromosomes will not be able to attach✓/Centromere will not be able to attach.
- and will not move to opposite poles ✓ Any (2)
- 6✓/six

2.2.3 (1)

2.2.4 -Chromosomes are arranged along the equator✓
-Attaching to spindle fibres by centromeres✓ (2)
(7)

2.3 2.3.1 (a) A✓- Chromatin network✓ (2)
(b) Carbohydrates✓/sugar, proteins✓/ amino acids (2)
Mark the first TWO

2.3.2

Diagram A/ plant cell	**Diagram B/ animal cell**
Have cell wall✓	No cell wall present✓
Has large vacuole ✓	Has small vacuoles✓
Chloroplast present ✓	No chloroplast present✓

Mark the first TWO **Any** (2x 2)+(1)table✓ (5)

2.3.3 - Rate of photosynthesis will be low✓
- Leading to low production of starch✓
- Thus less food available for animals✓
- Leading to starvation and death of some animals✓ (4)
(13)

TOTAL QUESTION 2 **[25]**

QUESTION 3

3.1 3.1.1 Osmosis✓/ endosmosis (1)

3.1.2 Increase ✓ (1)

3.1.3
- Solution in beaker has less solutes than the raddish✓/vegetable
- Therefore, it has high water potential✓
- The water will diffuse from the weak solution✓ in the beaker into the raddish vegetable✓
- Through a selectively permeable cell membrane of the vegetable✓

Any (4)

3.1.4
- Water will not enter or leave the cells of the raddish plant✓
- And other important essential nutrients will not be taken in✓
- Waste will also not be taken out of the cell✓
- Leading to death of the plant ✓

Any (2)
(8)



3.2.1 (a) Temperature ✓ (1)
(b) Enzyme activity✓ /Enzyme activity of Rennin (1)

3.2.2 The highest level of activity an enzyme can reach ✓/work at its best (1)

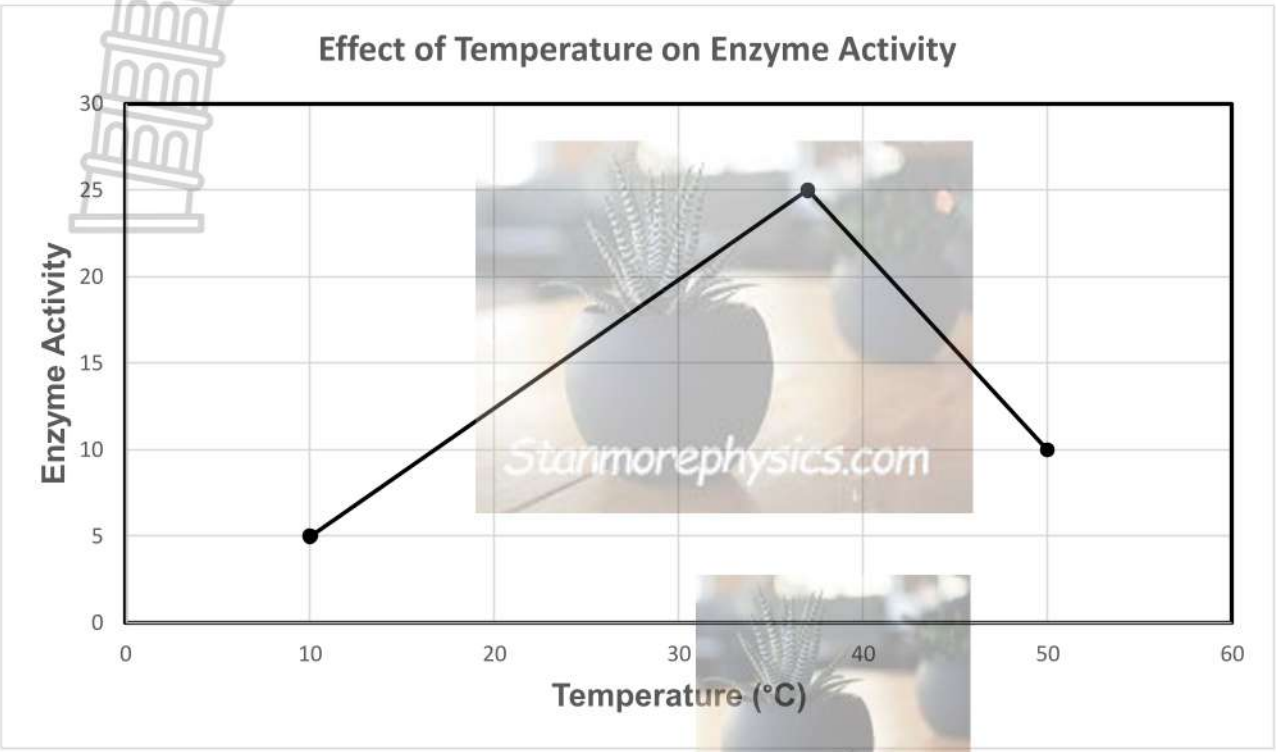
3.2.3
- A volume of 10cm^3 was used in each test tube✓
- 2 cm mark in each test tube✓
- Equal amount of milk✓
- 3ml of rennin was added in each test tube✓
- 15 minutes was given in each test tube✓

Mark the first TWO only (2)

3.2.4
- Enzymes denatures at high temperature✓
- They lose their shape✓
- Substrate no longer fit into an enzyme active site✓
- Resulting in low activity ✓

Any (3)

3.2.5



Marking Rubric:

Criteria	Mark Allocation
Correct type of graph **(T)**	1
Caption of the graph includes both variables**(C)**	1
Correct labels for X-and Y- axis and correct units (**L)**	1
Scale in both X and Y and axis **(S)**	1
Correct plotting **(P)** 1- 2 points plotted All 3 points plotted	 1 2

(6)
(14)

3.3 Actual size = $\frac{39x0.1}{13}$ mm✓

= 0.3✓ mm✓

(3)
[25]

TOTAL SECTION B **50**
GRAND TOTAL **75**