



KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

LIFE SCIENCES
COMMON TEST
MARCH 2024
MARKING GUIDELINE

MARKS: 50

This memorandum consists of 6 pages

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 is incorrect, do not credit. If sequence and links becomes 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	C✓✓		
	1.1.2	B✓✓		
	1.1.3	A✓✓		
	1.1.4	D✓✓	(4 x 2)	(8)
1.2	1.2.1	Hydrogen✓bond		
	1.2.2	Centrosome✓/centriole		
	1.2.3	Allantois✓	(3 x 1)	(3)
1.3	1.3.1	B only✓✓		
	1.3.2	A only✓✓	(2 x 2)	(4)
1.4	1.4.1	(a) Nucleotides✓		(1)
		(b) Ribose✓sugar		(1)
	1.4.2	(a) 3✓		(1)
		(b) 5✓		(1)
	1.4.3	0✓		(1)
				(5)
			TOTAL SECTION A:	20

SECTION B

QUESTION 2

- 2.1 2.1.1 (a) Amino acid✓ (1)
 (b) mRNA✓ (1)
- 2.1.2 TCA✓ (1)
- 2.1.3 Determines the sequence of amino acids that form a protein✓ (1)
(Mark the first ONE only)

- 2.1.4 - There will be a change in the sequence of bases on the mRNA✓
 - which may lead to the different tRNA✓
 - bringing different amino acid
 - resulting to the formation of different protein✓

OR

- There will be a change in the sequence of bases on the mRNA✓
 - which may lead to the different tRNA✓
 - bringing same amino acid✓
 - resulting to the formation of same protein✓

Any (3)

- 2.1.5 Ribosome✓ (1)
(8)

- 2.2 2.2.1 - Learning delays✓
 - Distinct physical features✓
 - Poor muscle development✓ (2)
(Mark the first TWO only)

- 2.2.2 40✓ (1)

- 2.2.3 $\frac{400}{100} = 4$ ✓ (2)

- 2.2.4 In Anaphase II✓
 - chromatids at position 21✓
 - fail to separate✓/non-disjunction of chromatids
 - leading to an extra chromosome 21✓ in the gametes

Any (2)

(7)

[15]

QUESTION 3

- 3.1 3.1.1 (a) Pituitary✓ gland (1)
 (b) Corpus luteum✓ (1)
- 3.1.2 It converts the ruptured follicle into corpus luteum✓ (1)
(Mark the first ONE only)
- 3.1.3 - Endometrium will not be further thickened✓
 - no implantation may occur✓
 - Miscarriage will occur✓ /no pregnancy
- OR**
- Endometrium will not be maintained✓
 - and no maintenance of pregnancy✓
 - Miscarriage may occur✓ (3)
- 3.1.4 - It decreases the FSH level in the blood✓
 - and no follicle development✓
 - leading decreased oestrogen✓ in the blood
 - Therefore, no thickening of the endometrium✓ Any (3)
(9)
- 3.2 3.2.1 Anastrozole medicine✓ (1)
- 3.2.2 - Thirty men participated✓ in the investigation
 - Average testosterone level was calculated✓ Any (1)
(Mark the first ONE only)
- 3.2.3 - To show that testosterone level increases in group B✓
 - is due to the anastrozole medicine✓ (2)
- 3.2.4 Anastrozole medicine increases the average testosterone level✓✓ in sub
 fertile men (2)
(6)
[15]

TOTAL SECTION B: 30

GRAND TOTAL: 50