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

PRINCIPLES RELATED TO MARKING LIFE SCIENCES MARCH 2024

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**.

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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.

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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

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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✓ **(Mark the first ONE only)**			(1)
	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✓ **(Mark the first TWO only)**		Any	(2)
	2.2.2	40✓			(1)
	2.2.3	$\left.\frac{400}{100}\right]$ ✓ = 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✓ **(Mark the first ONE only)**		(1)
	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✓ **(Mark the first ONE only)**	Any	(1)
	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

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