basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATIONS/
NATIONAL SENIOR CERTIFICATE EXAMINATIONS

LIFE SCIENCES P1

MAY/JUNE 2026

MARKING GUIDELINES

MARKS: 150

These marking guidelines consist of 9 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 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 the 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 the 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 the 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 standardisation 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. Marking guidelines 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.

19. **Changes to the marking guidelines**
No changes must be made to the marking guidelines without consulting the provincial internal moderator who in turn will consult with the national internal moderator (and the external moderators where necessary).

20. **Official marking guidelines**
Only marking guidelines bearing the signatures of the national internal moderator and the Umalusi moderators and distributed by the National Department of Basic Education via the provinces must be used.

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SECTION A

QUESTION 1

1.1	1.1.1	D✓✓		
	1.1.2	C✓✓		
	1.1.3	B✓✓		
	1.1.4	C✓✓		
	1.1.5	D✓✓		
	1.1.6	C✓✓		
	1.1.7	C✓✓		
	1.1.8	C✓✓		
	1.1.9	D✓✓	(9 x 2)	**(18)**
1.2	1.2.1	Negative feedback✓ mechanism		
	1.2.2	Acrosome✓		
	1.2.3	Graafian✓ follicle		
	1.2.4	Islets of Langerhans✓		
	1.2.5	Astigmatism✓		
	1.2.6	Maculae✓		
	1.2.7	Prolactin✓		
	1.2.8	Peripheral✓ nervous system	(8 x 1)	**(8)**
1.3	1.3.1	Both A and B✓✓		
	1.3.2	B only✓✓		
	1.3.3	None✓✓	(3 x 2)	**(6)**
1.4	1.4.1	Air sac✓		(1)
	1.4.2	R✓ ; S✓; T✓; Q✓ **(Mark first THREE only)**	Any	(3)
	1.4.3	- Vivipary✓ - Internal fertilisation✓ - Parental care✓ - Altricial✓ development **(Mark first TWO only)**	Any	(2) **(6)**
1.5	1.5.1	(a) Morula✓ (b) Blastula✓/Blastocyst		(1) (1)
	1.5.2	Mitosis✓		(1)
	1.5.3	C✓		(1)
	1.5.4	B → A → C✓✓ (In the correct order)		(2) **(6)**
1.6	1.6.1	(a) Semi-circular canals✓ (b) Auditory nerve✓		(1) (1)
	1.6.2	(a) F✓ - Oval window✓ (b) C✓ - Cochlea✓		(2) (2) **(6)**

TOTAL SECTION A: 50

SECTION B

QUESTION 2

2.1 2.1.1 (a) Testis✓ (1)

(b) Scrotum✓ (1)

2.1.2 (a) F✓- Epididymis✓ (2)

(b) C✓- Urethra✓ (2)

2.1.3
- Seminal vesicle✓
- Prostate✓gland
- Cowper's✓gland
- Testis✓

Any (2)

(Mark first TWO only)

2.1.4
- Fertility is reduced✓ since sperm cannot pass through✓/semen will not contain any sperm
- and fertilisation will not occur✓ (3)

(11)

2.2 2.2.1 Ovary✓ (1)

2.2.2 (a) An increase in tumour size causes an increase in FSH secretion✓ (1)

(b)
- Surgical removal✓of the tumour
- Radiation✓of the tumour

Any (1)

(Mark first ONE only)

2.2.3
- Ovulation will not occur✓
- No fertilisation✓ will take place

OR

- Absence of a corpus luteum leads to less progesterone✓
- The endometrium will not be maintained for implantation✓ (2)

2.2.4
- The corpus luteum✓ is formed
- which secretes progesterone✓
- High levels of progesterone✓
- inhibit the pituitary✓
- from secreting FSH✓ and
- FSH levels will drop✓ (6)

(11)

2.3
- Diploid cells in the ovary undergo mitosis✓
- to form (numerous) follicles✓
- At the onset of puberty✓ and
- under the influence of FSH✓
- one cell inside a follicle (enlarges and) undergoes meiosis✓
- Of the four cells that are produced, only one survives✓
- to form a (mature) haploid ovum✓

Any **(5)**

2.4	2.4.1	(a)	Corpus callosum✓	(1)
		(b)	Medulla oblongata✓	(1)
	2.4.2		Meninges✓	(1)
	2.4.3	(a)	A✓ - Cerebrum✓	(2)
		(b)	C✓ - Cerebellum✓	(2)
	2.4.4		- Impulses from the cerebrum✓/cerebellum - are not transmitted via the spinal nerves✓/cord to the - muscles/effectors in the leg✓ - preventing muscle control✓/coordination	(4) **(11)**
2.5	2.5.1	(a)	Performance training✓	(1)
		(b)	Hand-eye coordination✓	(1)
	2.5.2		12✓	(1)
	2.5.3		To measure hand-eye coordination✓	(1)
	2.5.4		- All participants were 11 years old✓ - Only girls✓/female participants were selected - A rubber ball was used✓ - They stood at a distance of 2 m from the wall✓ - The ball-catch test was conducted for 30 seconds✓ - The girls participated in the same training programme✓/training was conducted for six weeks /12 sessions - All the girls participated in the performance training programme✓ Any **(Mark first THREE only)**	(3)
	2.5.5		- More than 5 participants should be selected✓ - The ball-catch test should be repeated more than 3 times✓ - Increase the ball-catch test time to more than 30 seconds✓ - Repeat the investigation with another group✓ Any **(Mark first ONE only)**	(1)
	2.5.6		- The (average) number of ball catches increased✓ - due to performance training✓/ improved hand-eye coordination	(2)
	2.5.7		Performance training improves hand-eye coordination✓✓	(2) **(12)** **[50]**

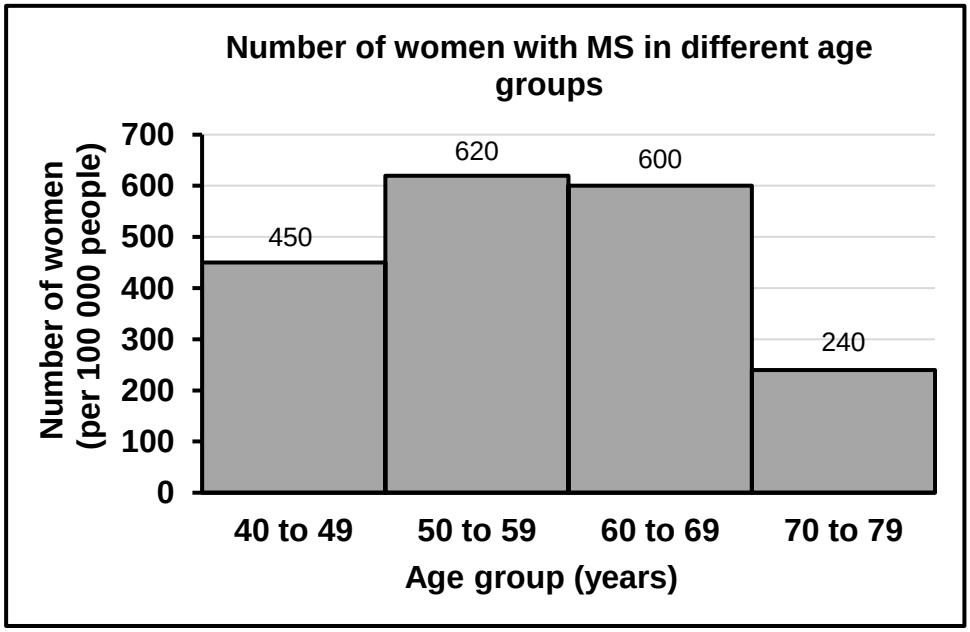
QUESTION 3

3.1 3.1.1 (a) Neurons✓ (1)

(b) Myelin sheath✓ (1)

3.1.2 The occurrence of MS is greater in men of higher age groups✓✓ (2)

3.1.3



Criteria for marking the graph:

Criteria	Mark allocation
Type of graph: Histogram is drawn (**T**)	1
Caption of the graph includes both variables (**C**)	1
Correct labels and units on X-axis and Y-axis (**L**)	1
Scale: (**S**) - Correct scale for Y-axis and - Same width of bars for X-axis	1
Plotting: (**P**) - 1 - 3 co-ordinates are plotted correctly - Only the 4 required co-ordinates are plotted correctly	1 2

(6)
(10)

If a bar or line graph is drawn, marks will be lost for:

- Type of graph
- Scale

If axes are transposed:

- Can get all marks, if labels are also swopped and bars are horizontal
- If labels are not corresponding, then:
  - Marks will be lost for labels and scale
  - Plotting can get credit if coordinates are correct for given labels

3.2 3.2.1 (a) Cornea✓ (1)

(b) Sclera✓ (1)

3.2.2
- It contains the photoreceptors✓
- which convert light stimuli into impulses✓ (2)

3.2.3
- The lens becomes less flexible✓/ is unable to change its shape (1)

(Mark first ONE only)

3.2.4 (a)
- The lens cannot become more convex✓/is less convex
- Light is not refracted enough✓/refracted too little
- The image is focussed behind the retina✓ Any (2)

(b) Convex✓ lenses (1)
(8)

3.3 3.3.1
- It regulates the metabolic rate✓
- It affects the growth/functioning of the heart✓
- It affects the growth/functioning of the nervous system✓
- It influences bone development✓
- It influences muscle control✓ Any (1)

(Mark first ONE only)

3.3.2 Short stature✓ (1)

3.3.3 $\left[\frac{22,3}{100}\right]$✓ x 265✓ = 59,1✓ **OR** 22,3%✓ x 265✓ = 59,1✓ (3)

3.3.4
- High levels of TSH✓
- indicate low thyroxin levels✓ (2)

(7)

3.4 3.4.1 (a) Nervous✓ system (1)
(Mark first ONE only)

(b) Endocrine✓ system (1)
(Mark first ONE only)

3.4.2 (a)
- The hypothalamus detects✓ low water levels
- The pituitary gland is stimulated✓ to
- release more ADH✓ which causes
- the renal tubules to become more permeable✓
- More water is reabsorbed✓ into the blood vessels of the kidney and
- less water is released in the urine✓
- Water levels return to normal✓/increase Any (5)

(b)
- To increase oxygen intake✓ which is needed for increased respiration✓/energy release
- To remove more carbon dioxide✓ which is a harmful waste product✓

(4)
(Mark first TWO only)
(11)

3.5 3.5.1 Adrenal✓ gland (1)

3.5.2 (a) Adrenalin✓ (1)

(b) Aldosterone✓ (1)

3.5.3 (a)
- They will constrict✓ so that
- more blood can flow to the heart✓/ muscles/ brain/ liver/ parts needed during an emergency (2)

(b)
- More glycogen will be converted to glucose✓ in the liver
- which is needed for energy✓/cellular respiration (2)

(7)

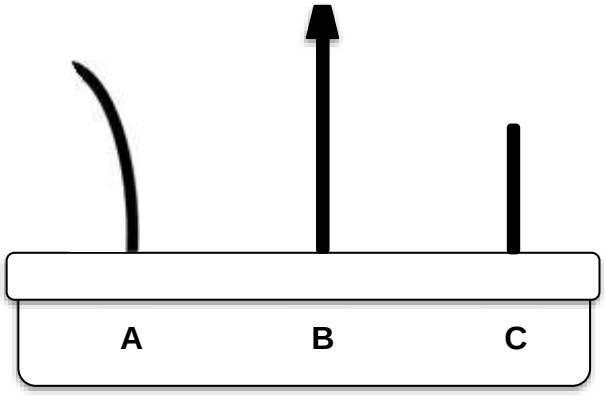
3.6 3.6.1 Phototropism✓ (1)

3.6.2 Auxins✓ (1)

3.6.3
- To remove the auxins✓ and
- prevent phototropism✓ (2)

(Mark first TWO only)

3.6.4



CRITERIA	MARK ALLOCATION
Stem **A** is bent towards the left	1
Stem **B** has grown straight upwards and is taller than tip **C**	1
No growth in stem **C** and stem **C** is shorter than tip **A** or **B**	1

NOTE: Tray need not be drawn (3)

(7)

[50]

TOTAL SECTION B: 100
GRAND TOTAL: 150

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