

Need an amazing tutor?

www.teachme2.com/matric



Collected and collated by

teachme2



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

LIFE SCIENCES P1

NOVEMBER 2023

MARKING GUIDELINES

MARKS: 150

These marking guidelines consist of 10 pages.

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.
19. **Changes to the memorandum**
No changes must be made to the memoranda without consulting the provincial internal moderator who in turn will consult with the national internal moderator (and the Umalusi moderators where necessary).
20. **Official memoranda**
Only memoranda 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.

SECTION A**QUESTION 1**

1.1	1.1.1	D✓✓		
	1.1.2	D✓✓		
	1.1.3	A✓✓		
	1.1.4	C✓✓		
	1.1.5	C✓✓		
	1.1.6	B✓✓		
	1.1.7	A✓✓		
	1.1.8	B✓✓		
	1.1.9	A✓✓		
	1.1.10	C✓✓	(10 x 2)	(20)
1.2	1.2.1	Vivipary✓		
	1.2.2	Urethra✓		
	1.2.3	Peripheral✓ nervous system		
	1.2.4	Glycogen✓		
	1.2.5	Placenta✓		
	1.2.6	Choroid✓		
	1.2.7	Myelin sheath✓		
	1.2.8	Epididymis✓	(8 x 1)	(8)
1.3	1.3.1	B only✓✓		
	1.3.2	Both A and B✓✓		
	1.3.3	A only✓✓	(3 x 2)	(6)
1.4	1.4.1	(a) Semi-circular canals✓		(1)
		(b) Round window✓		(1)
	1.4.2	(a) D✓ Eustachian tube✓		(2)
		(b) C✓ Cochlea✓		(2)
	1.4.3	(a) F✓		(1)
		(b) A✓		(1)
1.5	1.5.1	(a) Zygote✓		(1)
		(b) Morula✓		(1)
		(c) Blastocyst✓/blastula		(1)
	1.5.2	(a) Fertilisation✓		(1)
		(b) Endometrium✓		(1)
	1.5.3	Mitosis✓		(1)
	1.5.4	23✓		(1)
	1.5.5	Chorion✓		(1)
				(8)

TOTAL SECTION A: 50

SECTION B**QUESTION 2**

2.1 2.1.1 External✓ fertilisation (1)

2.1.2 - The eggs will dry out✓
- because they have no shells✓/are not amniotic eggs /have no amnion (2)

2.1.3 - The male and female bodies are in close contact✓
so that sperm can be released directly onto the ova✓

OR

- Many/up to 6 000 ova are released✓
since fertilisation is external✓ Any (1 x 2) (2)
(Mark the first ONE only)

2.1.4 - Many/up to 6 000 ova are released✓
since fertilisation is external✓/increasing the chance that some will be fertilised

OR

- The male and female bodies are in close contact✓
so that sperm can be released directly onto the ova✓
(Mark the first ONE only) Any (1 x 2) (2)
(7)

2.2 2.2.1 (a) Seminal vesicle✓ (1)

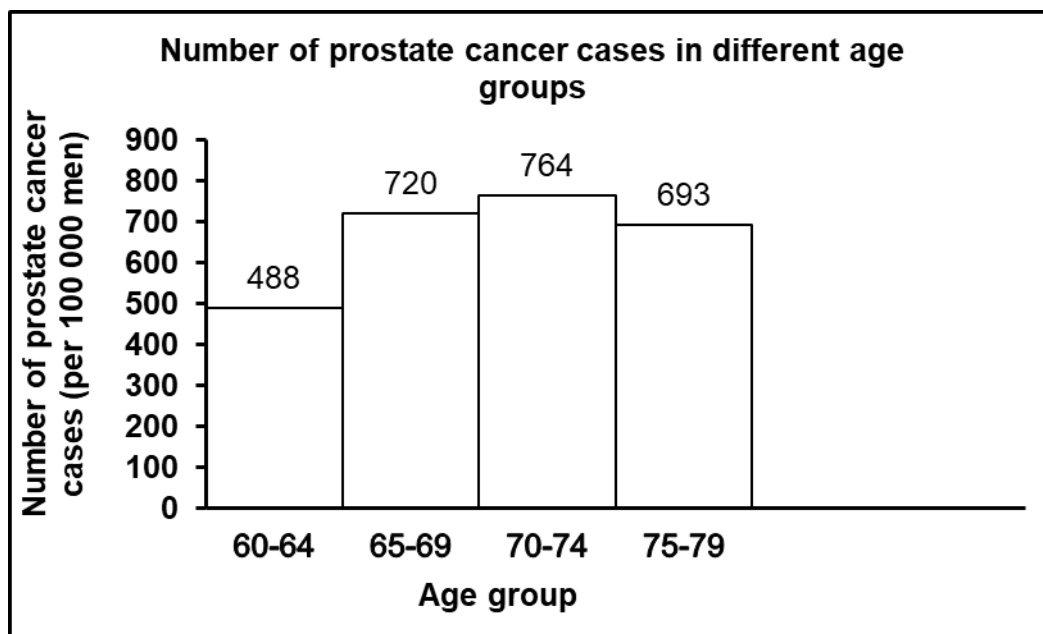
(b) Testosterone✓ (1)

2.2.2 - It is alkaline✓
to neutralise the acidic conditions of the vagina✓
- It contains mucus✓/provides medium
to facilitates the movement of the sperm✓
- It contains nutrients✓
to supply the sperm with energy✓ Any (1 x 2) (2)
(Mark first ONE only)

2.2.3 (a) (70 – 74) ✓

(1)

(b)

**Criteria for marking of the graph:**

Criteria	Mark allocation
Histogram is drawn (T)	1
Caption of the graph includes both variables (C)	1
Correct labels on the X-axis and Y-axis with correct unit on the Y-axis (L)	1
Correct scale for Y-axis and bars of equal width with no spaces for X-axis (S)	1
Plotting (P) correctly done for: 1- 3 age groups	1
All 4 required age groups only	2

(6)
(11)

If a bar graph 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 swapped 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

2.3 2.3.1 (a) - (Graafian) follicle✓ and
- Corpus luteum✓
(Mark first TWO only)

(2)

(b) - (Intense) pain✓
- Internal bleeding✓
(Mark first TWO only)

(2)

2.3.2	(a)	FSH✓	(1)		
	(b)	Oestrogen✓			
	OR				
		LH✓			
	OR				
		FSH✓			
2.3.3	The Graafian follicle keeps on producing oestrogen✓/fails to rupture		(1)		
	OR				
	The increased secretion of oestrogen stimulates the secretion of LH✓				
	OR				
	Excess production of FSH can cause the failure to ovulate✓/ Graafian follicle to rupture				
2.3.4	-	The corpus luteum does not degenerate✓and	Any (5) (12)		
	-	keeps on secreting progesterone✓			
	-	This will inhibit the pituitary gland✓			
	-	from secreting FSH✓			
	-	Therefore no follicle will develop✓ and			
	-	no ovulation✓ will take place			
2.4	2.4.1	(a) Spinal cord✓	(1)		
		(b) Pituitary gland✓/hypophysis	(1)		
	2.4.2	A✓	(1)		
	2.4.3	Between the two hemispheres of the cerebrum✓✓	(2)		
	2.4.4	(a)	- Part D / medulla oblongata which controls breathing✓	(2)	
			- was not injured✓		
		(b)	- The learner (occasionally) lost balance✓		(2)
			- due to no coordination of voluntary movements✓ by part B		
(c)		- The loss of memory indicates a possible injury to part A ✓/the cerebrum			
		- which is also responsible for hearing ✓/ (interpretation of) sound	(2) (11)		
2.5	2.5.1	- A rapid involuntary/automatic response✓	(2)		
		- to a stimulus✓			
	2.5.2	(a)	It ensures that the impulse is transmitted in one direction✓ (Mark first ONE only)	(1)	
		(b)	It is important for balance✓/movement	(1)	

QUESTION 3

	3.1.6	<ul style="list-style-type: none"> - Exercise can improve blood flow to the brain✓ and - it can maintain the volume of the hippocampus✓ which will - prevent a decrease in higher order thinking✓/cognitive abilities/learning abilities 	(3) (14)
3.2	3.2.1	(a) Kidney✓ (b) Endocrine✓ system	(1) (1)
	3.2.2	<ul style="list-style-type: none"> - It releases hormones✓ - directly into the blood✓/and it is ductless (Mark first TWO only)	(2)
	3.2.3	<ul style="list-style-type: none"> - Low salt levels are detected by receptor cells✓ in the kidney - Adrenal glands are stimulated✓ to secrete - more aldosterone✓ - which stimulates the renal tubules✓ - to be more permeable to salt✓ - This increases the reabsorption of salt✓ and - the salt levels in the blood increase✓/return back to normal 	Any (5)
	3.2.4	<ul style="list-style-type: none"> - The secretion of ADH✓ - will increase✓ - which will increase the permeability✓ - of the renal tubules✓ in X - so that more water is reabsorbed✓ from the filtrate 	(5) (14)
3.3	3.3.1	(a) Thermoregulation✓ (b) Hypothalamus✓	(1) (1)
	3.3.2	(a) Sweat gland✓ (b) Capillary✓/blood vessel	(1) (1)
	3.3.3	$\frac{(37,4 - 35,4)}{37,4} \times 100 = 5,35\%$	(3)
	3.3.4	<ul style="list-style-type: none"> - Skin temperature decreased✓/lowers from 37,4 °C to 35,4 °C - because part Q dilated✓/vasodilated - causing more blood to flow to the (surface of the) skin✓ and - part P became (more) active✓/produced more sweat - causing more heat to be lost✓ to the environment - through evaporation✓/ radiation/ convection 	(6) (13)

3.4	3.4.1	(a) (Presence/absence of) auxins✓	(1)
		(b) Growth of lateral branches✓	(1)
	3.4.2	- To ensure that the results are caused only by the presence of auxins✓ which - increases the validity✓ of the investigation	(2)
	3.4.3	- It acts as a control✓ - to show that the results of Plant D ✓ - are caused by the (presence of) auxins✓ - and not the agar jelly✓	Any (3)
	3.4.4	The presence of auxins slows down the growth of lateral branches✓✓	
		OR	
		The absence of auxins stimulated the growth of lateral branches✓✓	(2)
			(9)
			[50]
		TOTAL SECTION B:	100
		GRAND TOTAL:	150