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Western Cape Government

# METRO NORTH EDUCATION DISTRICT

## SCHOOL-BASED ASSESSMENT

## SEPTEMBER TRIAL COMMON EXAMINATION

## LIFE SCIENCES P1

## TASK NO: 6

## 11 SEPTEMBER 2026

**TOTAL: 150 marks**
**TIME: 2 hours 30 minutes**

This question paper consists of 16 pages

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**INSTRUCTIONS AND INFORMATION**

Read the following instructions carefully before answering the questions.

1. Answer ALL the questions.
2. Write ALL the answers in the ANSWER BOOK.
3. Start the answers to EACH question at the top of a NEW page.
4. Number the answers correctly according to the numbering system used in this question paper.
5. Present your answers according to the instructions of each question.
6. ALL drawings must be done in pencil and labelled in blue or black ink.
7. Draw diagrams, flow charts or tables only when asked to do so.
8. The diagrams in this question paper are NOT necessarily drawn to scale.
9. Do NOT use graph paper.
10. You must use a non-programmable calculator, protractor and a compass, where necessary.
11. Write neatly and legibly.

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## SECTION A

## QUESTION 1

1.1 Various options are provided as possible answers to the following questions. Choose the correct answer and write only the letter (A to D) next to the question number (1.1.1 to 1.1.10) on your ANSWER SHEET, for example 1.1.11 D.

1.1.1 Which ONE of the following hormones is involved in the conversion of glycogen to glucose?

A Adrenaline
B Insulin
C Thyroxin
D Glucagon

1.1.2 A human male underwent a vasectomy where the sperm ducts / vas deferens were cut.
Which ONE of the following structures would no longer contribute to the production of semen?

A Seminal vesicles
B Prostate gland
C Seminiferous tubules
D Cowper's gland

1.1.3 The table below shows the reaction times of four learners when responding to the same visual stimulus.

| NAME OF LEARNER | REACTION TIME (Milliseconds) |
|---|---|
| Thabo | 245 |
| Ayesha | 198 |
| Liam | 312 |
| Nomsa | 221 |

Which learner had the slowest reaction time in response to the stimulus?

A Thabo
B Ayesha
C Liam
D Nomsa

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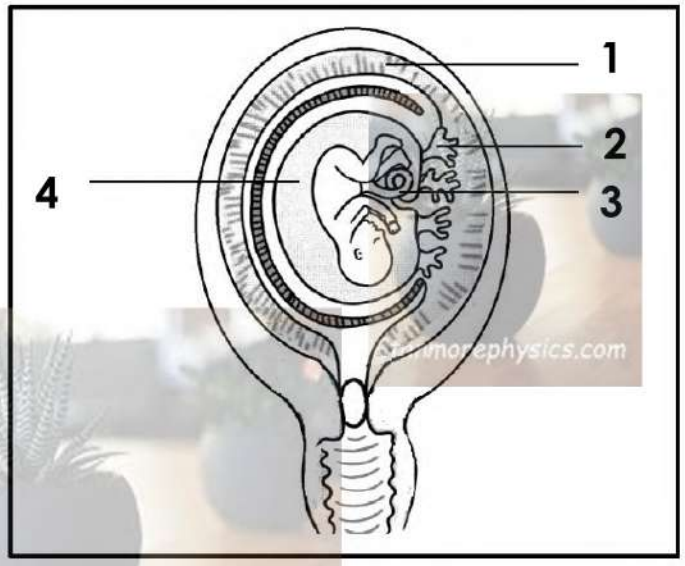
1.1.4 A learner drinks a large quantity of water after completing a sporting activity. The water level in the blood increases above the normal level. Which ONE of the following changes will bring water levels back to normal?

A Increased ADH secretion and increased reabsorption of water by the renal tubules.
B Decreased ADH secretion and decreased permeability of the renal tubules to water
C Increased ADH secretion and the production of concentrated urine
D Decreased ADH secretion and increased reabsorption of water by the renal tubules

**QUESTIONS 1.1.5 AND 1.1.6 REFER TO THE DIAGRAM BELOW, WHICH REPRESENTS A DEVELOPING FOETUS IN THE UTERUS.**




1.1.5 Which ONE of the following is responsible for protecting the foetus against temperature changes?

A 1
B 2
C 3
D 4

1.1.6 What would be a possible consequence for the foetus if part **2** produces insufficient progesterone?

A The foetus will not grow because there will be no cell division.
B The foetus may be underdeveloped due to a shortage of growth hormone.
C A miscarriage will take place because the endometrium will disintegrate.
D The foetus could be injured because there will be no shock absorption.

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**QUESTIONS 1.1.7 AND 1.1.8 REFER TO THE INVESTIGATION BELOW.**

An investigation was carried out to determine the fertility levels of healthy males in different age groups.

The procedure followed was as follows:

- 50 healthy males in each of the following age groups were asked to participate: 20–29, 30–39, 40–49, 50–59 and 60–69.
- Semen was collected from each of the males.

The number of active sperm cells present in the semen was counted for each man in each age group and averages were calculated.

1.1.7 Which ONE of the following was used to determine the dependent variable in the investigation?

A Fitness levels of the males
B Age groups of the males
C Number of active sperm cells
D Amount of semen

1.1.8 Which ONE of the following variables was kept constant during this investigation?

A Number of participants in each age group
B Fertility levels of males in each age group
C Number of active sperm cells
D Age groups of the males

1.1.9 A learner removed the apical buds from several young plants and observed changes in their growth pattern.

Which combination of growth responses would most likely be observed after the apical buds are removed?

(i) Increased growth of lateral buds
(ii) Increased number of lateral branches
(iii) Reduced apical dominance
(iv) Stems bend towards unilateral light

A (i), (ii) and (iii) only
B (i), (iii) and (iv) only
C (ii), (iii) and (iv) only
D (i), (ii), (iii) and (iv)

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1.1.10 Which ONE of the following glands has an exocrine function ONLY?

A pituitary gland
B adrenal gland
C prostate gland
D testis (10 x 2) **(20)**

1.2 Give the correct **biological** term for each of the following descriptions. Write only the term next to the question numbers (1.2.1 to 1.2.8) in the ANSWER BOOK

1.2.1 The site of fertilisation in the female reproductive system

1.2.2 The use of two eyes with overlapping fields of view so that separate images are combined and interpreted

1.2.3 A hollow ball of cells that implants into the endometrium

1.2.4 The shape of the lens in glasses that corrects long-sightedness

1.2.5 The stage in humans when sexual maturity is reached in males and females

1.2.6 The blood vessel that transports deoxygenated blood from the foetus towards the placenta

1.2.7 The type of light a plant receives from one side which causes phototropism

1.2.8 The maintenance of a stable internal environment in the body despite changes in the external environment. (8 x 1) **(8)**

1.3. Indicate whether each of the statements in COLUMN I applies to **A ONLY**, **B ONLY**, **BOTH A AND B** or **NONE** of the items in COLUMN II. Write **A only**, **B only**, **both A and B**, or **none** next to the question number (1.3.1 to 1.3.3) on the ANSWER SHEET.

| COLUMN I | COLUMN II |
|---|---|
| 1.3.1 Forms the placenta | A: Chorionic villi<br>B: Endometrium |
| 1.3.2 A light stimulus converted to a nerve impulse | A: Retina<br>B: Optic Nerve |
| 1.3.3 Chemicals used to kill weeds | A: Herbicides<br>B: Fungicides |

(3 x 2) **(6)**

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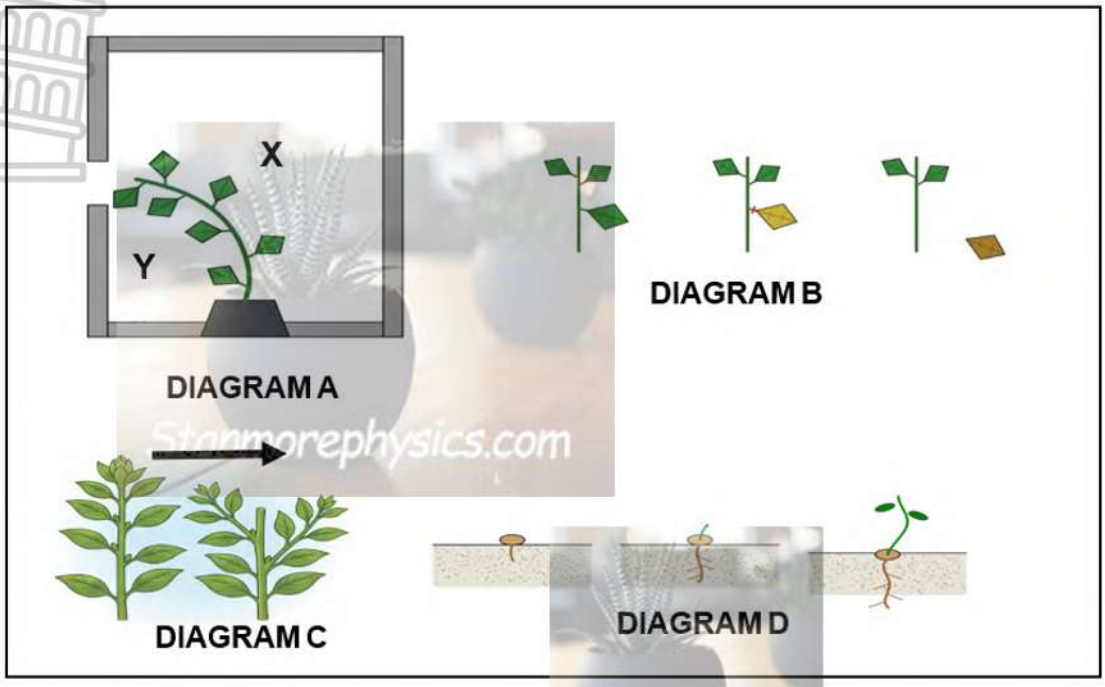
1.4 The diagrams below represent different plant responses caused by hormones.




1.4.1 Identify the plant hormone responsible for the result in:

(a) Diagram **A** (1)

(b) Diagram **B** (1)

(c) Diagram **C** (1)

(d) Diagram **D** (1)

1.4.2 Identify the stimulus that causes the growth response shown:

(a) in diagram **A** (1)
(b) by the roots in diagram **D** (1)

1.4.3 Using **X** and **Y** in diagram **A**, state which side of the stem has:

(a) the highest rate of cell division (1)

(b) the lowest concentration of auxins (1)

**(8)**

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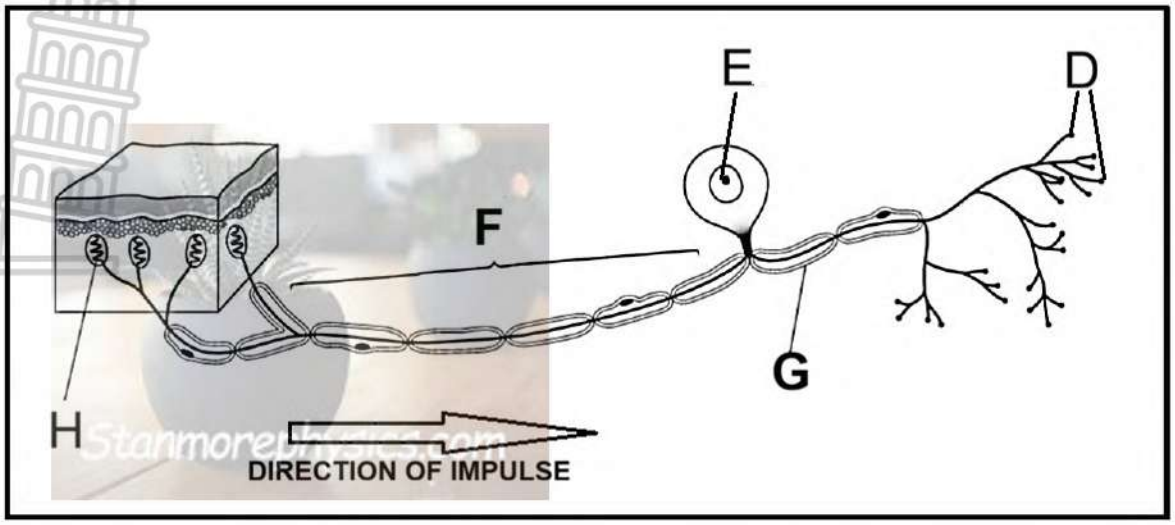
1.5 The diagram below represents a part of a reflex arc.




1.5.1 Identify:

(a) the type of neuron represented in the diagram. (1)

(b) part **E** (1)

(c) part **F** (1)

1.5.2 Give the LETTER and NAME of the part that:

(a) insulates the neuron. (2)

(b) detects the stimulus and converts it into an impulse. (2)

1.5.3 Name the disorder which occurs when part **G** gets attacked and is broken down. (1)
**(8)**

**TOTAL SECTION A: [50]**

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## SECTION B

## QUESTION 2

2.1 The paragraph below refers to reproduction in crocodiles

> All crocodiles lay hard-shelled fertilised eggs. A female crocodile lays an average of 12 – 48 eggs. The eggs are deposited into the soil, and the sun's heat and the heat from the natural decomposition of vegetation maintain a warm temperature that aids in the embryo's development. Until hatching occurs, the female remains close to the nest to protect the eggs from predators.
>
> After three months, the young are fully developed. While still in the egg, the young may utter squeaks, perhaps signalling that they are ready to emerge. The young crocodiles are born with their eyes open and are immediately mobile.
> The female remains close to her offspring and protects them from predators for several weeks to months.

2.1.1 (a) State the type of fertilisation that occurs in crocodiles. (1)

(b) Explain ONE way in which this type of fertilisation in QUESTION 2.1.1(a) increases reproductive success in crocodiles. (2)

2.1.2 From the paragraph, state why crocodiles are considered to be oviparous. (1)

2.1.3 Give TWO characteristics from the paragraph indicating that crocodiles are precocial. (2)

2.1.4 Explain ONE strategy that crocodiles display to increase survival rate of its young. (2)
**(8)**

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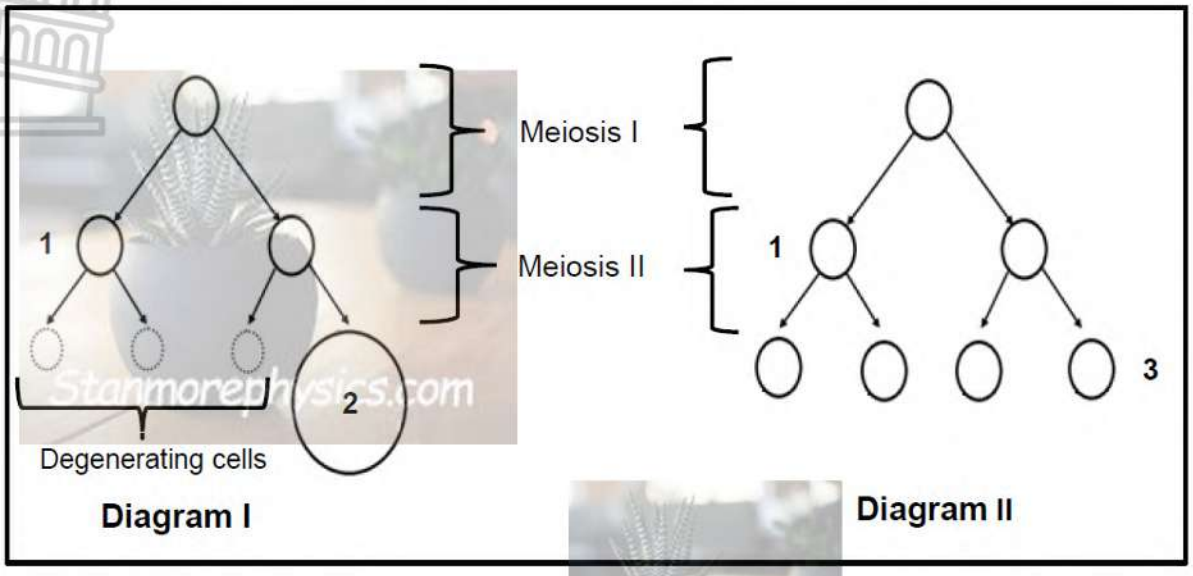
2.2 Diagrams **I** and **II** below represent gametogenesis in males and females (not in any particular sequence).

The diagrams are NOT drawn to scale.




2.2.1 Identify the specific type of gametogenesis in Diagram **II**. (1)

2.2.2 Where in the human body does the type of gametogenesis shown in Diagram **II** take place? (1)

2.2.3 Name the hormone that stimulates the process in Diagram **II**. (1)

2.2.4 Give the chromosome number of:

(a) the cells at **1** (1)

(b) Cell **2** (1)

2.2.5 Name and describe the process that leads to the formation of cell **2.** (6)
**(11)**

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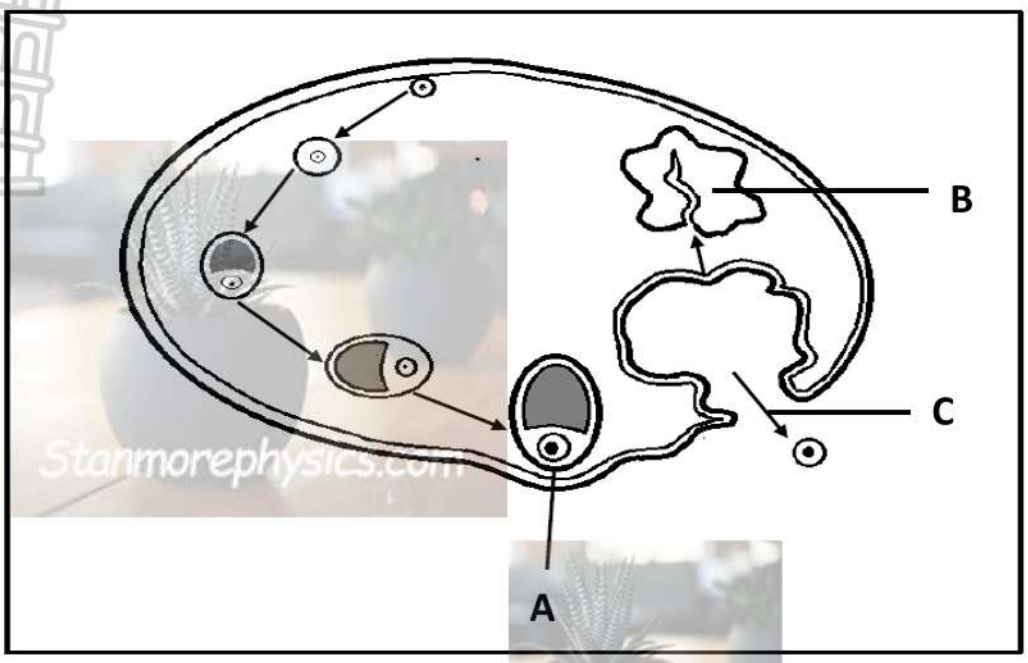
2.3 The diagram below represents the sequence of events that takes place during a certain phase of the menstrual cycle of a female.




2.3.1 Identify structure **B** (1)

2.3.2 Give the name of the:

(a) Hormone that controls the development of structure **A.** (1)

(b) Process taking place at **C.** (1)

2.3.3 Describe the changes that take place in the uterus as a result of the hormone secreted by structure **A.** (2)

2.3.4 In some females, ovarian cysts (fluid filled cavities inside or on top of the ovary), develop, preventing the development of the follicles and disrupting the normal hormone functioning.

(a) Explain how an ovarian cyst could prevent ovulation from taking place. (3)

(b) Explain ONE reason, other than blocked ovulation, why ovarian cysts might reduce a woman's chances of falling pregnant. (2)

(c) A patient's blood tests show abnormally high levels of luteinizing hormone (LH) compared to low levels of follicle stimulating hormone (FSH), a pattern often associated with cystic ovaries.

Explain how a disruption in the normal FSH levels, could lead to reduced fertility. (4)

**(14)**

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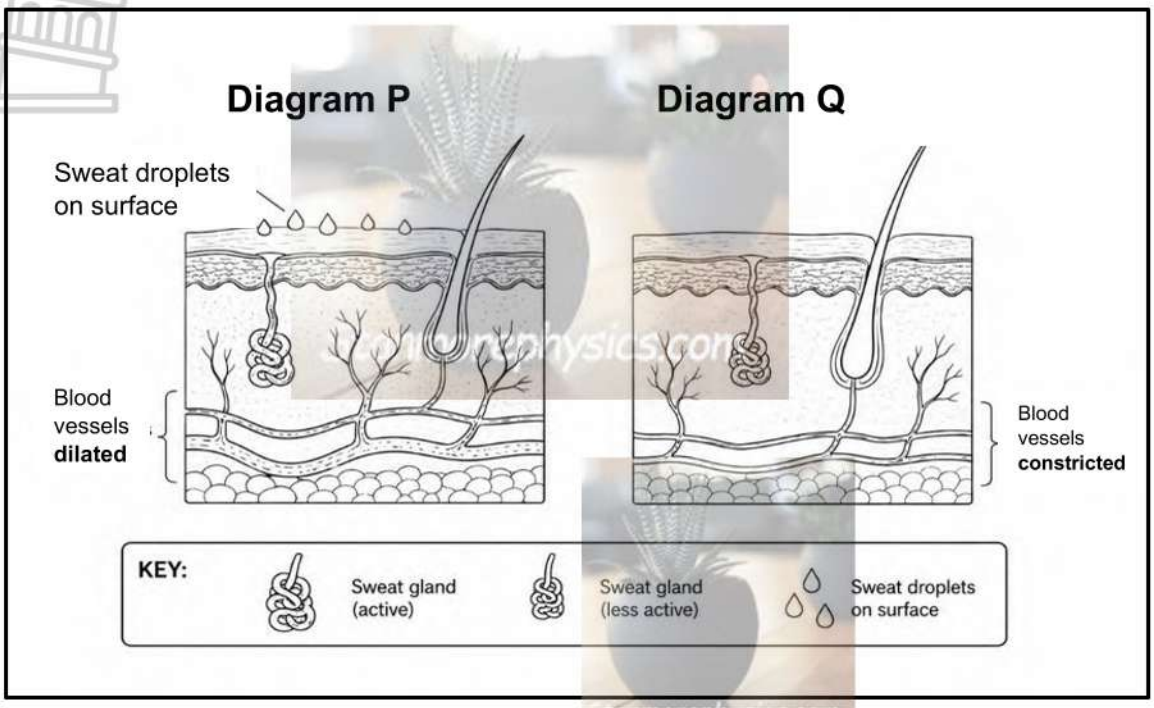
2.4 The diagrams below represent the skin under two different conditions.

**Diagram P** shows the skin after a person has been exercising in a hot environment.
**Diagram Q** shows the skin under normal environmental conditions.




2.4.1 Name the process by which the skin regulates the temperature. (1)

2.4.2 Give the LETTER of the diagram that represents a person who is experiencing a lower-than-normal body temperature. (1)

2.4.3 Describe how the changes represented in Diagram **P** help to restore the body temperature back to normal range. (4)
**(6)**

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2.5

Diabetes insipidus is a condition in which the body produces insufficient antidiuretic hormone (ADH), or the kidneys do not respond adequately to ADH. People with this condition produce large volumes of dilute urine and may become dehydrated.

Scientists investigated the effect of added ADH on the volume of urine produced by people with diabetes insipidus.

The procedure was as follows:

- Consent was obtained from 100 people with diabetes insipidus.
- The participants were divided into two equal groups.
- Participants in Group A received a daily dose of synthetic ADH at a dosage of 0,2 mg per kg of body mass.
- Participants in Group B did not receive the ADH treatment.
- All participants consumed the same volume of water during the investigation.
- The volume of urine produced by each participant was measured over a 24-hour period.
- The investigation was repeated for several days and the average 24-hour urine volume for each participant was calculated.

After the investigation, the average 24-hour urine volume in Group A was 2 000 ml less than that of Group B.

2.5.1 State the dependent variable of this investigation. (1)

2.5.2 List TWO variables that were kept constant and which ensured the validity of the investigation. (2)

2.5.3 State ONE way in which the reliability of this investigation can be improved. (1)

2.5.4 Explain the purpose of Group **B** in this investigation. (2)

2.5.5 Calculate the daily amount of synthetic ADH given to a participant in Group **A** who had a body mass of 60 kg.

Show ALL your calculations, including the correct unit. (3)

2.5.6 Give a conclusion for this investigation. (2)

**(11)**

**TOTAL QUESTION 2: [50]**

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**QUESTION 3**

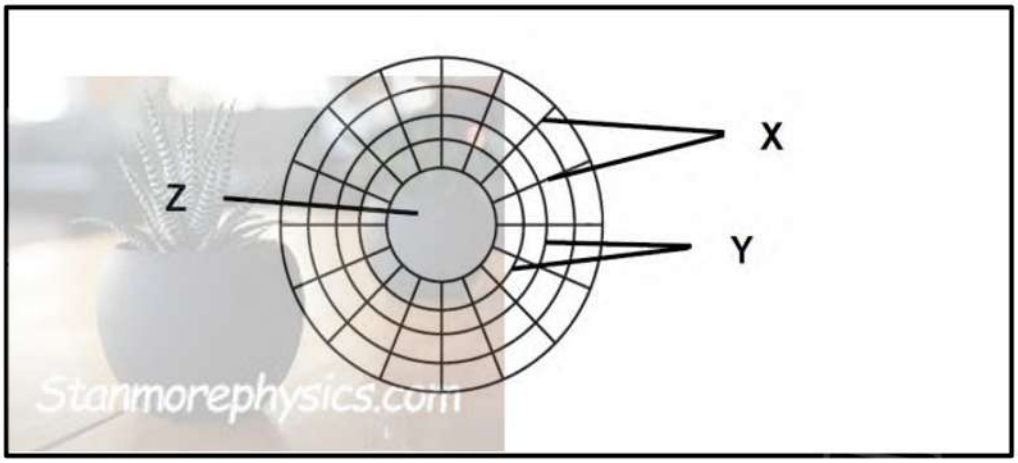
3.1 Nandi took part in an experiment to determine the effect of light from different distances on the size of the pupil. A torch light was placed at six consecutive positions (1 to 6) with equal distances from Nandi's face.

The diameter of Nandi's pupil was measured at each position, and the results are shown below.

| POSITION OF TORCH | DIAMETER OF PUPIL (mm) |
|---|---|
| 1 | 1 |
| 2 | 2 |
| 3 | 2,5 |
| 4 | 3 |
| 5 | 4,5 |
| 6 | 5,5 |

3.1.1 Name the part of the autonomic nervous system that is responsible for the change in the pupil size observed in this experiment. (1)

3.1.2 The diagram below represents the pupillary mechanism in the human eye.




Identify:

(a) Part **X** (1)

(b) Part **Z** (1)

3.1.3 A person suddenly looks up from a bright mobile phone screen to a dark room.

Describe the changes that occur in the eye by using the letters **X**, **Y** and **Z**. (4)

**(7)**

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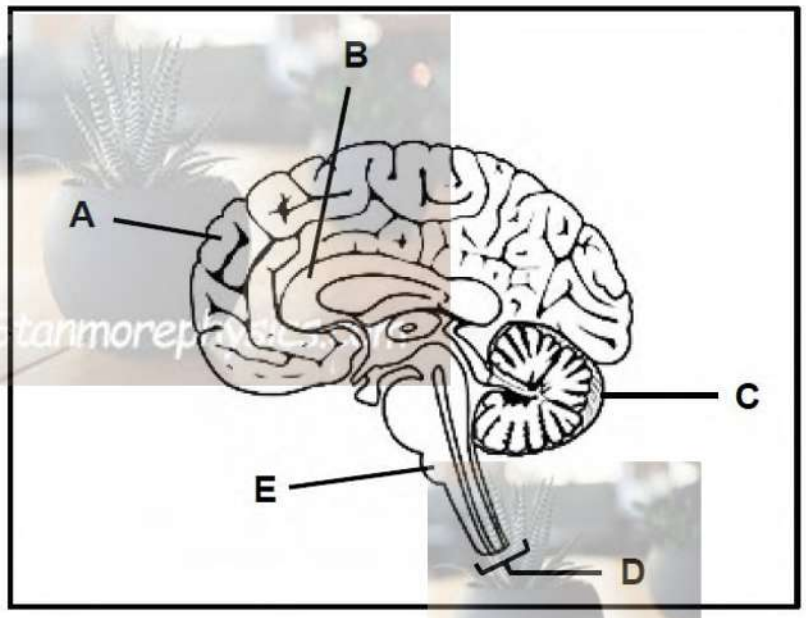
3.2 Name and describe the process that allows the lens to change its shape when looking at a nearby object. **(6)**

3.3 The diagram below shows a part of the human nervous system.




3.3.1 Identify part:

(a) **A** (1)

(b) **B** (1)

3.3.2 Give the LETTER and NAME of the part that:

(a) coordinates balance and posture. (2)

(b) regulates the rate and depth of breathing. (2)

3.3.3 A learner accidentally steps onto hot coals and immediately pulls his foot away.

(a) Describe the pathway of the nerve impulses to bring about a reflex action. (5)

(b) Explain why the response to a reflex action is usually rapid. (2)
**(13)**

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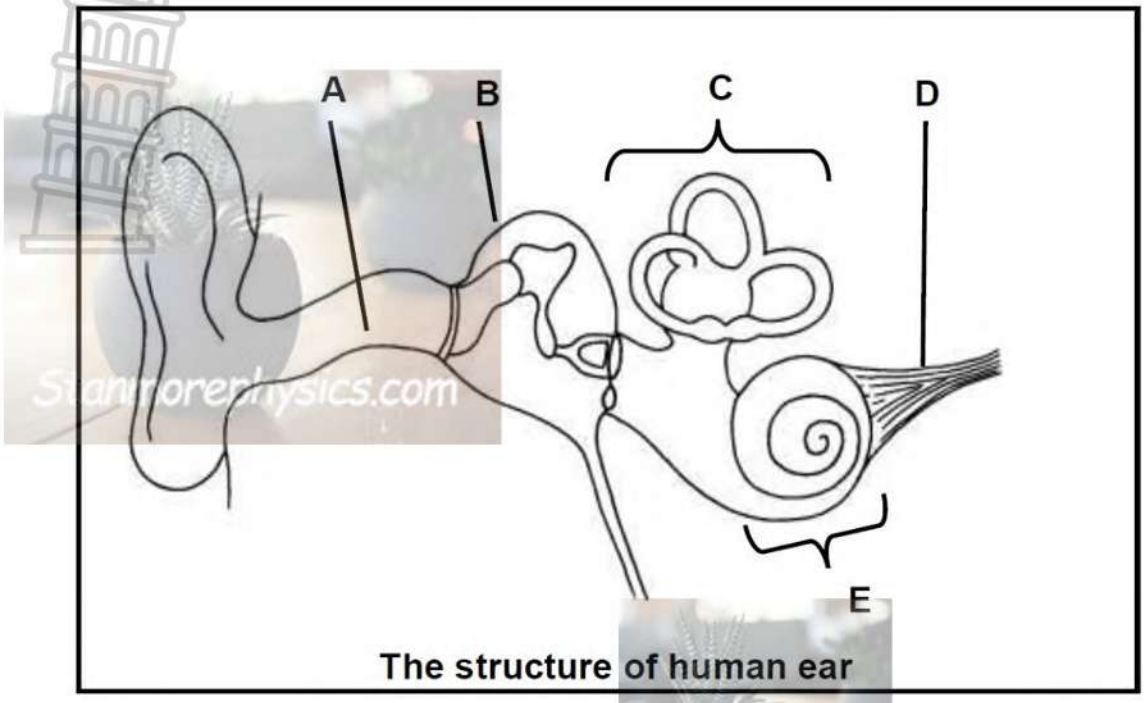
3.4 The diagram below shows part of the human ear.




The structure of human ear

3.4.1 Identify part:

(a) **C** (1)

(b) **D** (1)

3.4.2 Name the part of the ear where a grommet will be inserted. (1)

3.4.3 Give the LETTERS of TWO parts that are normally filled with fluid. (2)

3.4.4 Name the receptors that are found in part **E**. (1)

3.4.5 Explain the consequences for a child if the maculae are damaged. (4)

3.4.6 Explain why a person will suffer from hearing loss if the oval window is damaged. (4)

**(14)**

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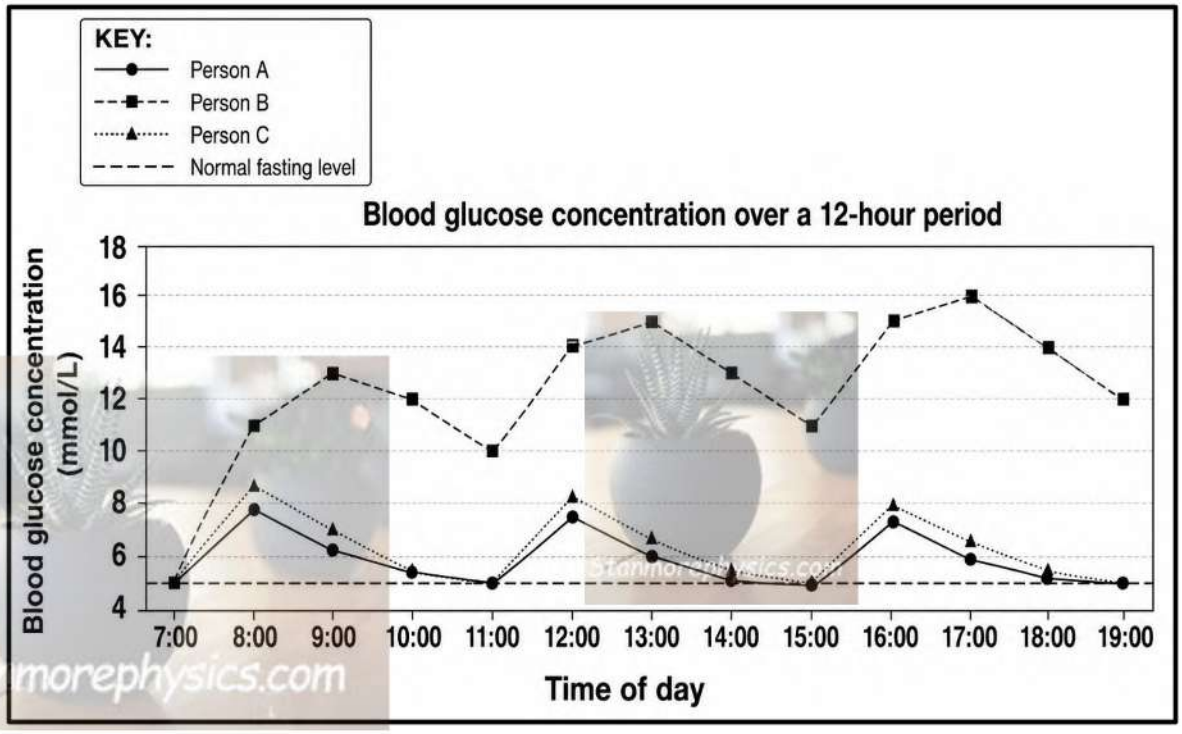
3.5 The graph below shows the blood glucose concentrations of three people over a 12-hour period. The three people consumed meals at the same time.

**Person A:** A healthy person with normal blood glucose regulation.

**Person B:** A person with diabetes mellitus whose pancreas produces little or no insulin.

**Person C:** A person with diabetes mellitus who receives insulin treatment before meal




3.5.1 Name the cells in the pancreas that secrete hormones. (1)

3.5.2 At what time did the people consume their last meal? (1)

3.5.3 State TWO differences between the blood glucose concentration of Person **A** and Person **B** after meals. (2)

3.5.4 Describe how insulin helps to return the blood glucose concentration of Person **A** to the normal range after a meal. (3)

3.5.5 Explain why the blood glucose concentration of Person **C** does not remain as high as that of Person **B** after meals. (3)
**(10)**

**TOTAL QUESTION 3: [50]**

**TOTAL SECTION B: [100]**

**GRAND TOTAL: [150]**

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# SCHOOL-BASED ASSESSMENT

# SEPTEMBER TRIAL COMMON EXAMINATION

## LIFE SCIENCES P1

# ADAPTED MARKING GUIDELINE

## 11 SEPTEMBER 2026

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This Marking Guideline consists of 8 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 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 memo discussion meeting.

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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.

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**SECTION A**

**QUESTION 1**

1.1.1 D ✓✓ **or** **A** ✓✓ **BUT Not!! : D/C X**
1.1.2 C ✓✓
1.1.3 C ✓✓
1.1.4 B ✓✓
1.1.5 D ✓✓
1.1.6 C ✓✓
1.1.7 C ✓✓
1.1.8 A ✓✓
1.1.9 A ✓✓
1.1.10 C ✓✓ (10 x 2) **(20)**

1.2 1.2.1 Fallopian tube ✓
1.2.2 Stereoscopic ✓ / binocular vision
1.2.3 Blastula ✓ / Blastocyst
1.2.4 Convex ✓ lenses **Concession**: "Biconvex' Tick mark on "convex"
1.2.5 Puberty ✓
1.2.6 Umbilical artery ✓
1.2.7 Unilateral✓ light
1.2.8 Homeostasis✓ (8 x 1) **(8)**

1.3 1.3.1 **Both A and B** ✓✓
1.3.2 A only ✓✓
1.3.3 A only ✓✓ (3 x 2) **(6)**

1.4.1 (a) Auxins ✓ (1)
(b) Abscissic acid ✓ (1)
(c) Auxins ✓ (1)
(d) Gibberellins ✓/ Auxins (1)

1.4.2 (a) Light ✓ (1)
(b) Gravity ✓ (1)

1.4.3 (a) X ✓ (1)
(b) Y ✓ (1)
**(8)**

1.5.1 (a) Sensory ✓ neuron (1)
(b) Nucleus ✓ **/ Nucleolus** (1)
(c) Dendrite ✓ (1)

1.5.2 (a) G ✓ Myelin sheath ✓ (2)
(b) H ✓ Receptor ✓ (2)

1.5.3 Multiple sclerosis ✓ **/ MS** (1)
**(8)**

**TOTAL SECTION A: [50]**

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**SECTION B**

**QUESTION 2**

2.1 2.1.1 (a) Internal✓ fertilisation (1)

(b) - Gametes/ developing embryos are inside the female body✓
- protected against drying out✓ / predators / washed away
- Gametes are in close proximity✓
- increases chance of fertilization✓ **(Any 1 x 2 )** (2)

2.1.2 - they lay eggs ✓ 1)

2.1.3 - born with their eyes open ✓
- immediately mobile ✓ (2)

2.1.4 - the female remains close to the young ✓ **/ nest**
- to protect them from predators ✓ (2)
**(8)**

2.2 2.2.1 Spermatogenesis ✓ (1)

2.2.2 - Seminiferous tubules ✓/ testes (1)

2.2.3 - Testosterone ✓ **Concession: FSH** ✓ (1)

2.2.4 (a) 23 ✓ (1)

(b) 23 ✓ (1)

2.2.5 - Oogenesis ✓ *
- 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 produced, only one survives✓
- To form a (haploid ovum)✓

**(Compulsory mark + any 5)** (6)
**(11)**

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2.3 2.3.1 Corpus luteum ✓ (1)

2.3.2 (a) FSH ✓/ Follicle stimulating hormone (1)
(b) Ovulation ✓ (1)

2.3.3 - **endometrium** ✓
- **becomes thicker** ✓ / **vascular / glandular** (2)

2.3.4 (a) - no new follicles can develop✓/ mature
- decrease in LH ✓
- prevents formation of Graafian follicle ✓
- no ovum released✓ **Any 3** (3)

(b) - No/ less oestrogen /progesterone secreted✓
- prevent thickening of endometrium for implantation✓ (2)

(c) - Low FSH ✓
- prevents follicles from maturing✓
- **no / reduced ovulation ✓/ no / reduced fertilisation**
- **less / no oestrogen** ✓
- endometrium does not thicken ✓
- preventing implantation ✓ (Any 4) (4)

**(14)**

2.4 2.4.1 Thermoregulation ✓ (1)

2.4.2 Diagram Q ✓ (1)

2.4.3 - **Blood vessels in the skin widens✓ / vasodilation takes place**
- **more blood flows to the skin✓**
- **more heat is lost** ✓
- **through radiation ✓ / conduction / convection**
- **sweat glands become more active** ✓
- **causes heat loss through evaporation** ✓ **Any 4** (4)

**(6)**

2.5 2.5.1 Volume of urine ✓ (1)

2.5.2 - All participants consumed the same volume of water✓
- All participants had diabetes insipidus✓
- equal number of participants in each group✓
- volume of urine for both groups was measured over a 24 hour period

**(Mark first TWO only)** **Any 2** (2)

2.5.3 - Use more than 100 people ✓ **Mark first ONE only** (1)

2.5.4 - To show that it is only the added ADH treatment✓
- that caused the change in volume of urine produced✓ (2)

2.5.5 (60 x 0,2)✓ = 12✓ mg✓ (3)

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2.5.6 Added ADH causes a decrease in volume of urine production in patients with diabetes insipidus✓✓ (2)

**(11)**

**TOTAL QUESTION 2: [50]**

## QUESTION 3

3.1 3.1.1 Sympathetic ✓ nervous system (1)

3.1.2 (a) Radial muscles ✓ (1)
(b) Pupil ✓ (1)

3.1.3
- (Muscles in) **X** / radial muscles contract✓
- (Muscles in) **Y** / circular muscles relax✓
- Part **Z** / pupil dilates / **widens** ✓
- more light enters the eye✓ (4)

**(7)**

3.2
- (Eye) Accommodation ✓ *
- Ciliary muscles / **body** contract(s) ✓
- Suspensory ligaments loosen✓/ tension on the lens decreases
- Lens becomes more convex✓ causing
- Light to be refracted more✓
- To form a clear image on the retina✓ **(1* compulsory + 5)** **(6)**

3.3. 3.3.1 (a) Cerebrum ✓ (1)
(b) Corpus callosum ✓ (1)

3.3.2 (a) C ✓ Cerebellum ✓ (2)
(b) E ✓ Medulla oblongata ✓ (2)

3.3.3 (a) (The impulse) is transmitted by the sensory neuron✓
- via the dorsal root of the spinal nerve✓ to
- the interneuron✓ and to
- the motor neuron✓
- by synaptic✓ contact
- It is then transmitted via the ventral root (of the spinal nerve)✓
- to the effector ✓ / **muscle** which brings about the reflex action

**Any 5** (5)

(b) - **The impulse does not travel to the cerebrum ✓/ brain / it is processed in the spinal cord**
- therefore, the pathway is short ✓ and the response rapid. (2)

**(13)**

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3.4 3.4.1 (a) Semi-circular canals ✓ **NOT ! : Semilunar canals** (1)

(b) Auditory nerve ✓ (1)

3.4.2 Tympanic membrane ✓ (1)

3.4.3 C ✓ and E ✓ (2)

3.4.4 Hair cells ✓/ Organ of Corti (1)

3.4.5
- Changes in the position of the head (to gravity) will not be picked up✓
- Stimulus will not be converted into an impulse✓
- Impulses will not be sent to the auditory nerve ✓
- The cerebellum will not be stimulated ✓
- Balance will not be restored✓ * / the person will lose balance

**Compulsory* 1 + Any 3** (4)

3.4.6
- The oval window will vibrate less ✓ / not vibrate / generate less pressure waves
- Less/ no pressure waves will be generated ✓ in the fluid
- Of the cochlea ✓
- Less / no receptors will be stimulated ✓
- And less/ no impulses will reach the cerebrum✓ for interpretation **Any** (4)

**(14)**

3.5 3.5.1 Islets of Langerhans ✓ (1)

3.5.2 15:00 ✓ (1)

3.5.3 **Person A:** Blood glucose increases after a meal and returns to normal.✓ / Blood glucose returns to approximately normal before the next meal

**Person B**: Blood glucose increases to a higher level after a meal.✓/ Blood glucose remains above the normal level for longer (2)

3.5.4
- **Increased blood glucose concentration stimulates the pancreas✓/ islets of Langerhans to secrete more insulin. ✓**
- **Insulin promotes the uptake of glucose by body cells✓**
- **and conversion of excess glucose to glycogen in the liver / muscles.**
- **Blood glucose concentration therefore decreases✓ towards the normal level**

**Any** (3)

3.5.5
- Person C **previously received** insulin treatment before meals. ✓
- Therefore, excess glucose is removed from the blood✓
- and the blood glucose concentration decreases towards the normal range✓

(3)

**(10)**

**[50]**

**TOTAL SECTION B: 100**

**GRAND TOTAL: 150**