



Province of the
EASTERN CAPE
EDUCATION



**NATIONAL
SENIOR CERTIFICATE**

IBANGA 12

SEPTEMBER 2022

**LIFE SCIENCES P1
ISIKHOKELO SOKUMAKISHA**

AMANQAKA: 150

Eli phepha leempendulo linamaphepha asi8.

IPRINCIPLEZI EZIMAYELANA NOKUMAKISHA LIFE SCIENCES

1. **Ukuba kunikwe iimpendulo ezingaphezu kwamanqaku anikiweyo**
Yeka ukumakisha wakufika kumanqaku aphezulu ubhale umgca owavy no 'max' kwimargin esekunene.
2. **Xa, umzekelo, zintathu izizathu ezifunwayo kube kunikwe ezintlanu**
Makisha ezokuqala ezintathu noba zichanekile okanye azichanekanga.
3. **Xa yonke iprocess inikwe apho bekufunwa isiqingatha**
Yifunde yonke ucredithe iindawo ezamkelekileyo.
4. **Xa kubuzwe icomparison, kodwa kunikwe inkcaza**
Yamkele ukuba iidifference/nesimilarity zicazile.
5. **Xa bekufunwa itabulation, kodwa kunikwe umhlathi**
Abafundi baya kuphulukana namanqaku ngokungatabulathi.
6. **Xa iidiagram ezihamba neannotation zinikwe endaweni ekufunwa kuyo inkcaza**
Abafundi bayakuphulukana namanqaku.
7. **Xa iiflow zinikwe endaweni yedescription**
Abafundi baya kuphulukana namanqaku.
8. **Xa isequene ivutyiwe nelink zingenzi ngqiqo**
Apho isequene ne link zichanekile, creditha. Xa isequene and ne link, zingachanekanga, ungacredithi. Xa isequene ne link ziphinde zachaneka, phinda ucredithe.
9. **Iabbreviation ezingekho mthethweni**
Zamkele ukuba ziqale zachazwa kwimpendulo. Ukuba azichazwanga, ungayicredithi abbreviation engaziwayo, kodwa yicredithe yonke enye indawo yempendulo ukuba ichanekile.
10. **Iwrong numbering**
Ukuba iimpendulo zilandelelana ngokufanelekileyo ngokwemibuzo, kodwa kunikwe inombolo ewrong, yamkela.
11. **Xa ulwimi olusetyenzisiweyo lutshintsha inthetho ekubhekiswe kuyo**
Ungamkeli.
12. **Ispelling error**
Ukuba impendulo isondele kweyaziwayo, yamkele, xa ingathethi enye into kwiLife Sciences okanye ingaphumanga emxholweni.
13. **Xa amagama acommon enikwe endaweni yeterminology**
Wamkele, xa amkelekile kwinational memo discussion meeting.
14. **Xa kubuzwe unobumba yedwa, kodwa kunikwe igama (okanye iverse)**
Ungacredithi.

15. **Xa iiunit zinganikwanga kwimeasurement**
Abafundi bayakuphulukana namanqaku. Imemorandum iyakubanamanqaku asecani abelwa iiunit.
16. **Yibanenkathalo ngempendulo ezinengqiqo, ezisenokubekwa ngendlela eyahlukileyo.**
17. **Isihloko**
Zonke iillustration (iidiagram, iigraph, iitable, njalonjalo) mazibenesihloko.
18. **Icode-switching yolwimi oluvumelekileyo (iiterm and iconcept)**
Igama elinye okanye amabini avela ngolwimi oluvumelekileyo lungeyilulo olona lusetyenziswe kwimpendulo zovavanyo lomfundi malicredithwe, xa lamkelekile. Imarker elwaziyo ulwimi olo mayicelwe. Ibhekisa kuzo zonke iilwimi ezivumelekileyo.

ICANDELO A**UMBUZO 1**

- | | | | | |
|-----|--------|--|----------|------|
| 1.1 | 1.1.1 | A ✓✓ | | |
| | 1.1.2 | A ✓✓ | | |
| | 1.1.3 | B ✓✓ | | |
| | 1.1.4 | D ✓✓ | | |
| | 1.1.5 | D ✓✓ | | |
| | 1.1.6 | C ✓✓ | | |
| | 1.1.7 | D ✓✓ | | |
| | 1.1.8 | A ✓✓ | | |
| | 1.1.9 | A ✓✓ | | |
| | 1.1.10 | C ✓✓ | (10 x 2) | (20) |
| | | | | |
| 1.2 | 1.2.1 | Iprolactin ✓ | | |
| | 1.2.2 | Imitosis ✓ | | |
| | 1.2.3 | Ireflex arc ✓ | | |
| | 1.2.4 | Iautonomic ✓ nervous system | | |
| | 1.2.5 | Isynapse ✓ | | |
| | 1.2.6 | Icranium ✓ | | |
| | 1.2.7 | Igestation ✓ | | |
| | 1.2.8 | Ithyroid stimulating hormone ✓/ TSH | | |
| | 1.2.9 | Iosmoregulation ✓ | | |
| | 1.2.10 | Icorpus callosum ✓ | (10 x 1) | (10) |
| | | | | |
| 1.3 | 1.3.1 | A only ✓✓ | | |
| | 1.3.2 | None ✓✓ | | |
| | 1.3.3 | A only ✓✓ | (3 x 2) | (6) |
| | | | | |
| 1.4 | 1.4.1 | (a) Ihypothalamus ✓ | | (1) |
| | | (b) Ipituitary ✓ gland | | (1) |
| | | (c) ADH ✓/ i-antidiuretic hormone | | (1) |
| | | (d) Irenal tubule ✓ /collecting tubule/distal convoluted tubule | | (1) |
| | 1.4.2 | Iwavumela ngakumbi amanzi ukuba agqithe kuyo ✓ | | (1) |
| | 1.4.3 | Ukubila ✓/ukuphefumla. (Nayiphi eNYE)
(Makisha eyokuqala Enye qha) | | (1) |
| | | | | |
| 1.5 | 1.5.1 | (a) Imotor neuron ✓ | | (1) |
| | | (b) Isensory neuron ✓ | | (1) |
| | 1.5.2 | Icell body ✓ | | (1) |
| | 1.5.3 | (a) A ✓ Imyelin sheath ✓ | | (2) |
| | | (b) C ✓ Iidendrite ✓ | | (2) |
| | 1.5.4 | II ✓ | | (1) |

EWONKE AMANQAKU ECANDELO A: 50

ICANDELO B**UMBUZO 2**

2.1 2.1.1

T ✓

IDAYAGRAM I	IDAYAGRAM II
Inecervix enye ✓	Inecervix ezimbini ✓
Inesibeleko esinye ✓	Inezibeleko ezibini ✓

(Makisha ezokuqala eziMBINI qha)

(Nawaphi ayi 2 x 2 + 1) (5)

- 2.1.2 - Iectopic pregnancy ✓
 - I-intra-uterine foetal growth restriction ✓
 - Iabnormal placentation ✓
 - Ifoetal malposition ✓ (Nawaphi ayi 2 x 1) (2)
- (Makisha ezokuqala eziMBINI qha)**

- 2.1.3 - Amaqondo aphezulu eprogesterone ✓
 - ainhibita ipituitary gland ✓
 - ekukhupheni i-FSH ✓
 - Ngako oko, akukho follicle intsha iyakudevelopha ✓
 - kungekho naqanga liyakuphuma ✓ / iiovulation ayinakwenzeka
 - nto leyo ithintela ifertilisation ✓ (Nawaphi ayi 4 x 1) (4)

- 2.2 - Iembryo idevelopha imembreyini engaphandle, ichorion ✓
 - ne membreyini engaphakathi, iamnion ✓
 - Iamnion yenza icavity ✓
 - Ieneamniotic fluid ✓
 - Ichorionic villi ✓ esuka kwichorion
 - Idibana ne-endometrium ✓
 - zenze iplacenta ✓
 - Ihollow tube ebizwa ngeumbilical cord ✓ idibanisa
 - Iembryo neplacenta ✓
 - Iumbilical cord ineumbilical artery ✓
 - neumbilical vein ✓ (Nawaphi ayi 8 x 1) (8)

- 2.3 2.3.1 Imithambo yegazi ✓ (1)

- 2.3.2 - Imithambo yegazi/ uA uyaconstricta ✓ / iivasoconstriction iyenzeka
 - ethi yenze libelincinci igazi eliya kwisafeyisi yeskin ✓
 - ngako oko, bubabuncinci ubushushu obulahlekayo ✓ busiya
 kwienvironment (3)

- 2.3.3 - Iyakubancinci/ingabikho iioxygen ✓ ne
 - glucose eziya kwiskin cells ✓
 - nto leyo yenza ingabikho/yehle imetabolism/ ✓ icellular
 respiration/kwehle iheat energy (3)

- 2.3.4 - Ukuphuma kancinci kombilo /ukungabili kwehlisa ievaporation
 ✓ /kwehle icooling
 - into ethi inyuse ibody temperature ✓ /ioverheating
 - Le nto yenza idenaturing yee-enzyme ✓
 - eyakwenza iimetabolic process ziyeke ✓ (4)

- 2.4 2.4.1 - Amehlo avalekile ✓/akaboni
 - Azikho iintsiba ✓
 - Azikwazi kuhamba ✓ (Nawaphi ayi2 x 1)
(Makisha ezokuqala eziMBINI qha) (2)
- 2.4.2 - Azifunyanwa lula zipredator ✓
 - nje ngoko zingakwazi ✓kubaleka
 - Ngako oko, ayanyuka amathuba okuphila ✓ (3)
- 2.4.3 - Umlinganiselo weyolk kwiprecocial bird uyakubamnini ✓
 kunokwialtricial
 - kuba zifuna iinutrient ezininzi ✓
 - ukuze zikwazi ukudevelopha ngokupheleleyo ✓ (3)
- 2.5 2.5.1 (a) Izinc supplement ✓ (1)
 (b) Amaqondo etestosterone egazini ✓ (1)
- 2.5.2 - Amaqondo etestosterone egazini ametwa ✓
 - phambi kokuba kuadministarishwe izinc supplement ✓ (2)
- 2.5.3 - Udidi lwezinc product ✓
 - Iconcentration yezinc ✓
 - Umlinganiselo wezinc ✓
 - Indlela yokuadministarisha izinc ✓
 - Ixesha lokuadministarisha izinc supplement (Nawaphi ayi 2 x 1)
(Makisha awokuqala amaBINI qha) (2)
- 2.5.4 - Kwasetyenziswa amadoda ayi60 ✓
 - Iinvestigation yenziwa ixesha eliziveki eziyi12 ✓/ eziyi6
 (Nawaphi ayi 2 x 1) (2)
(Makisha awokuqala amaBINI qha)
- 2.5.5 Izinc supplement zinyusa amaqondo etestosterone egazini ✓✓ (2)
- 2.5.6 - Istimuleyitha iproduction yesperm cells ✓
 - Stimuleyitha ipuberty ✓
(Makisha awokuqala amaBINI qha) (2)
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UMBUZO 3

- 3.1 3.1.1 Icochlea (1)
- 3.1.2 Ihambisa i-impulse eya ebuchotsheni ✓ (1)
(Makisha elokuqala eliNYE qha)
- 3.1.3 Ithintela iecho ✓ (1)
- 3.1.4 - Ukutshintsha ngokukhawuleza kwespeed nedirection yehead movement ✓
 - kustimuleyitha icristae ✓
 - ezikwisemi-circular canal ✓
 - Ukutshintsha kweposition kweposition yentloko ✓
 - kustimuleyitha imaculae ✓
 - ezikwiutriculus nesacculus ✓
 - ukuba zithumele i-impulse ✓
 - ehamba ngeauditory nerve ✓
 - iyointerprethwa kwicerebellum ✓
 - Icerebellum ithumela ii-impulse kwiskeletal muscle ✓ kurestorwe ibalance (Nawaphi ayi 7 x 1) (7)
- 3.1.5 - Akukho zivibration ziyakwenzeka ✓
 - Kungekho napressure waves ziyakwenzeka kwiinner ear ✓
 - IOrgan of Corti/ihair cell aziyi kustimuleyithwa ✓
 - Ngako oko, akukho zi-impulse ziyakuthunyelwa kwicerebrum ✓ (4)
- 3.2 3.2.1 Ukuveza amagqabi kwilayithi ukulungiselela iphotosynthesis ✓ (1)
(Makisha elokuqala eliNYE qha)
- 3.2.2 Igeotropism ✓/ igravitropism (1)
- 3.2.3 Ukuelimineyitha igalelo legravity ✓/ukuexpoza istem kwigravity ngamacala onke (1)
- 3.2.4 - IiAuxin ziyakuya kwicala elingezantsi letip ekhulayo ✓
 - Kuyakubakho iiauxin ezininzi kwicala elingezantsi ✓ lestem
 - nto leyo eyakustimuleyitha icell elongation ✓/ igrowth
 - Ngako oko, icala elingezantsi liyakukhula ngokukhawuleza ✓
 - Le nto iyakwenza istem sigobele phezulu ✓ (5)
- 3.2.5 - Iauxin ✓
 - eproduswa kwitip yestem ✓ iyakusuka
 - Ngako oko, istem asisayi kukhula ✓
 - Iilateral branch ziyakudevelopha ✓
 - xa ingekho iapical dominance ✓ (Any 4 x 1) (4)
- 3.2.6 Iigibberellin ✓ (1)

- 3.3 3.3.1 Icornea ✓ (1)
- 3.3.2 - Iicircular muscle ziyarelayer ✓
 - Loo gama iiradial muscle zicontracta ✓
 - Nto leyo yenza ipupil idilate ✓ (Any 2 x 1) (2)
- 3.3.3 - Iimuscles ezikuA/ iciliary muscle ziyakucontracta ✓
 - Ze loo nto yenze iisuspensory ligament zibeslack ✓
 - Nto leyo ikhokelela kwilens eround ngakumbi ✓/econvex (3)
- 3.3.4 (a) C ✓ (1)
- (b) - Xa iidrainage channel zivaleke ngokupheleleyo ✓
 - Iexcess fluid ihlala kwimehlo ✓ (2)
- (c) - Xa iiphotoreceptor zonzakele izistimulus azinakuguqulwa zibezinerve impulse ✓
 - Ukonzakala kweoptic nerve kuthintela ukuhamba kweenerve impulse ✓
 - eziya kwicerebrum ukuyointerprethwa ✓ (3)
- 3.4 3.4.1 (a) Ikidney ✓ (1)
- (b) Ialdosterone ✓ (1)
- 3.4.2 (a) - Amaqondo etyiwa egazini ayehla ✓
 - Kuba incinci/ayikho ialdosterone esecrethiweyo ✓
 - Ngako oko, iirenal tubule ziba permeable kancinci ✓
 - Ibencinci ityiwa ebuyela egazini ✓
 - njengoko amaqondo etyiwa egazini angaphaya kwaqhelekileyo ✓ (5)
- (b) - Iyakubancinci ityiwa emchanyeni ✓
 - Kuba iirenal tubule ziyigqithisa ngakumbi ityiwa ✓
 - Ityiwa eninzi iyakubuyela egazini ✓
 - Njenngoko amaqondo etyiwa egazini ebengaphantsi kwaqhelekileyo ✓ (4)

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EWONKE AMANQAKU ECANDELO B: 100
EWONKE AMANQAKU: 150