KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 11

LIFE SCIENCES

COMMON TEST

SEPTEMBER 2023

MARKING GUIDELINE

Stanmorephysics.com

MARKS: 50

TIME: 1 hour

This marking guideline consists of 4 pages.

SECTION A

QUESTION 1



1.1

1.1.1 D✓✓
1.1.2 A✓✓
1.1.3 A✓✓

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

1.2

1.2.1 Excretion✓
1.2.2 Migration✓
1.2.3 Interspecific competition✓

(1 X 3) **(3)**

1.3

1.3.1 A only✓✓
1.3.2 A only✓✓

(2 x 2) **(4)**

1.4 1.4.1 (a) renal vein✓ (1)

(b) kidney ✓ (1)

(c) ureter) ✓ (1)

1.4.2 (a)E✓ - renal artery✓ (2)

(b)D ✓ - urinary bladder✓ (2)
(7)

TOTAL MARKS SECTION A: 20



SECTION B

QUESTION 2

2.1 2.1.1
- they can tackle prey too fast for them✓
- they can capture prey too large for them✓

(mark first TWO only) (2)

2.1.2 Predator-prey✓ relationship (1)

2.1.3
- large numbers mean that an individual is less likely to be caught by predator✓ / prey have a better opportunity to escape
- as there are many eyes to spot a predator✓/as running in herds may reduce the ability of a predator to focus on one individual to attack (2)

2.1.4
- running in herds intimidates the predator✓
- thus, making the prey less endangered✓/ vulnerable
- if the prey numbers increase the predator numbers will increase✓
- causing the prey numbers to decrease✓ (3)
- which will cause the predator numbers to decrease✓ Any **(8)**

2.2 2.2.1 As the time of exercise increase, the rate of breathing also increases✓ (1)

2.2.2 $\frac{60-25}{25} \times 100$ = 35

$\frac{35}{25} \times 100$✓

140✓% (2)

2.2.3
- During strenuous exercise the carbon dioxide level in the blood increases✓
- Receptor cells in the (carotid) artery in the neck/aorta are stimulated✓
- to send impulses to the medulla oblongata✓
- The medulla oblongata sends an impulse to the breathing muscles✓
- to contract more actively✓
- and increase the rate/depth of breathing✓
- An impulse is also sent to the heart to beat faster✓
- More carbon dioxide is taken to the lungs✓/exhaled (4)
- The carbon dioxide levels return to normal Any **(7)**

TOTAL QUESTION 2 15

QUESTION 3

3.1 3.1.1

$P = \frac{FXS}{M}$

$= \frac{50 \times 75}{15}$ ✓✓

= 250 ✓ snails (3)

3.1.2 Mark-recapture ✓method (1)
(4)

3.2 3.2.1 The fertility rate decreased from 1980 to year 2000✓ and then increased in year 2010✓ (2)

3.2.2

Developed countries ✓	**Developing countries**
Longer life expectancy	Lower life expectancy

2 + 1mark for the table

(3)
(5)

3.3 3.3.1 (a) smoking ✓ (1)

(b) lung cancer ✓ (1)

3.3.2
- Gender ✓
- Smokers ✓
- Age ✓

(mark first TWO only) (2)

3.3.3
- 200 males were used✓ / A large sample size
- The investigation was repeated ✓

(mark first TWO only) (2)
(6)

TOTAL QUESTION 3 [15]
TOTAL SECTION B [30]

TOTAL ARKS [50]

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