**GRADE 12 ASSIGNMENT TERM 3**

**MARKING GUIDELINES**

**QUESTION 1**

|  |  |  |  |
| --- | --- | --- | --- |
| 1.1  1.2  1.3  1.4 | 11 ✓ x 100 ✓  246  = 4,47% ✓  Continuous ✓ variation  There is a continuous range of phenotypes ✓/the fat content % is a range |  | (6)  (3)  (1)  (1)  **(11)** |

**QUESTION 2**

|  |  |  |
| --- | --- | --- |
| 2.1 | True🗸 | (1) |
| 2.2 | False🗸 | (1) |
| 2.3 | False🗸 | (1) |
| 2.4 | True🗸 | (1) |
| 2.5 | True🗸 | (1) |
| 2.6 | False🗸 | (1)  **(6)** |

|  |  |
| --- | --- |
| **QUESTION 3** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 3.1  3.2  3.3  3.4 | Breeding at different times of the year ✓  Prevention of fertilization due to the lack of fit between sexual organs✓  Infertile offspring ✓  Species specific courtship hehaviour ✓ |  | **(4)** |

|  |  |
| --- | --- |
| **QUESTION 4** |  |

|  |  |  |
| --- | --- | --- |
| 4.1 | The calls of these male frogs had a higher pitch ✓, were of shorter length ✓and had a faster rate✓. Any  **Mark first two only** | (2) |
| 4.2 | **-** Reproductively isolated✓/unable to breed with original northern  and southern frogs  - because the mating call differs ✓  - Offspring between northern and southern frogs not viable ✓ Any | (2) |
|  |  |  |
| 4.3 | - Conduct DNA analysis✓ and  - check for differences✓ | (2) |
|  |  |  |
| 4.4 | - There is a great deal of variation in male calls/males ✓  - calls most closely resembling southern calls/calls with faster  note rate and longer duration ✓  - were selected by southern females more often ✓  - than calls most closely resembling northern calls ✓  - there was competition between the males ✓  - males with southern call more likely to reproduce with  southern females ✓  - offspring with southern call had a bigger chance of survival✓  - gene for call passed to offspring ✓  - over time southern mating call most numerous in species. ✓ | (6) |
| 4.5 | **Reliable:**  - research conducted by experts/scientists in field  - from a university ✓  - many scientists agree ✓  **OR**  **Not reliable:**  - no peer review ✓  - no publication of findings mentioned ✓ | (2) |
|  |  | **(14)** |

**QUESTION 5**

|  |  |  |  |
| --- | --- | --- | --- |
| 5.1 | Survival of the owls 🗸 |  | (1) |
| 5.2 | The brown owls are less suited to survive than the white owls 🗸🗸  **OR**  The white owls are more suited to survive than the brown owls 🗸🗸 |  | (2) |
| 5.3 | (a) 50 ✓  (b) 2000 ✓  (c) 70 – 60 ✓ x 100 ✓  60  = 16,67✓% OR 16,7% |  | (1)  (1)  (3) |
| 5.4 | - There is a decrease in the number of white owls 🗸 because  - there is less snow 🗸 and  - white owls will not be camouflaged 🗸/will be more visible to  predators |  | (3) |
| 5.5 | - They counted/sampled the number of owls at the beginning 🗸  of the 4-month period  - and again, at the end 🗸  - Then they calculated the difference 🗸 between the two numbers |  | (3) |
| 5.6 | Same:  - Time period🗸/4 months  - Population🗸  - Season🗸  - Method of calculation🗸 Any |  | (1)  **(15)**  **[50]** |

**Assignment Term 3**

**Weighting: Practical Skills**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Practical Skills** | | | | | | |
| **Follow instructions** | **Handle equipment** | **Make observations** | **Draw a diagram** | **Calculation** | **Interpret** | **Design/Plan** |
|  |  | ✓ | ✓ | ✓ | ✓ | ✓ |

**Weighting: Cognitive Levels**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Question** | **Cognitive Levels** | | | | **Levels of difficulty** | | | | |
| **Level A**  **Knowledge** | **Level B**  **Understanding** | **Level C**  **Application** | **Level D**  **Evaluate, analyse & synthesize** | **Easy** | **Moderate** | **Difficult** | **Very difficult** | **Source of difficulty** |
| 1.1 | 1 | 2 | 3 |  | 6 |  |  |  |  |
| 1.2 |  | 3 |  |  | 3 |  |  |  |  |
| 1.3 |  |  | 1 |  |  | 1 |  |  |  |
| 1.4 |  | 1 |  |  | 1 |  |  |  |  |
| 2.1 | 1 |  |  |  | 1 |  |  |  |  |
| 2.2 |  |  |  | 1 | 1 |  |  |  |  |
| 2.3 – 2.6 |  |  |  | 4 | 4 |  |  |  |  |
| 3.1 – 3.4 |  |  | 4 |  |  | 4 |  |  |  |
| 4.1 |  | 2 |  |  |  | 2 |  |  |  |
| 4.2 |  | 2 |  |  |  | 2 |  |  |  |
| 4.3 |  | 2 |  |  |  | 2 |  |  |  |
| 4.4 |  |  | 6 |  |  |  | 6 |  | Source/Task |
| 4.5 |  |  |  | 2 |  | 2 |  |  |  |
| 5.1 |  |  |  | 1 |  |  | 1 |  | Source |
| 5.2 |  |  |  | 2 |  | 2 |  |  |  |
| 5.3 a |  | 1 |  |  | 1 |  |  |  |  |
| 5.3 b |  | 1 |  |  | 1 |  |  |  |  |
| 5.3 c |  | 3 |  |  | 3 |  |  |  |  |
| 5.4 |  |  |  | 3 | 3 |  |  |  |  |
| 5.5 |  |  |  | 3 | 3 |  |  |  |  |
| 5.6 |  |  |  | 1 | 1 |  |  |  |  |
| **Total** | **2** | **17** | **14** | **17** | **28** | **15** | **7** |  |  |
| **Percentage** | **4** | **34** | **28** | **34** | **56** | **30** | **14** |  |  |