**Science Targeted Feedback Analysis**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Year 12**

**Biology: Homeostasis Test**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

MCQ: \_\_\_\_\_\_\_\_ /15 Written: \_\_\_\_\_\_ /30 Extended Answer:\_\_\_\_\_\_\_/10 Total: \_\_\_\_\_\_\_\_\_ / 55

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|  | • Homeostasis is the process by which the body maintains a relatively constant internal environment; it involves a stimulus-response model in which change in external or internal environmental conditions is detected and appropriate responses occur via negative feedback | Changes in an organism’s metabolic activity, in addition to structural features and changes in physiological processes and behaviour, enable the organism to maintain its internal environment within tolerance limits (temperature, nitrogenous waste, water, salts, and gases) | Thermoregulatory mechanisms include structural features, behavioural responses and physiological mechanisms to control heat exchange and metabolic activity; animals can be endothermic or ectothermic | Animals have a variety of behavioural, physiological and structural adaptations to maintain water and salt balance in terrestrial and aquatic environments | To maintain water balance and allow for gas exchange, xerophytes and halophytes have a variety of structural and physiological adaptations | The type of nitrogenous waste produced by different vertebrate groups can be related to the availability of water in the environment |
| Qu 1 |  |  |  |  |  |  |
| Qu2 |  |  |  |  |  |  |
| Qu3 |  |  |  |  |  |  |
| Qu4 |  |  |  |  |  |  |
| Qu5 |  |  |  |  |  |  |
| Qu6 |  |  |  |  |  |  |
| Qu7 |  |  |  |  |  |  |
| Qu8 |  |  |  |  |  |  |
| Qu9 |  |  |  |  |  |  |
| Qu10 |  |  |  |  |  |  |
| Qu11 |  |  |  |  |  |  |
| Qu12 |  |  |  |  |  |  |
| Qu13 |  |  |  |  |  |  |
| Qu14 |  |  |  |  |  |  |
| Qu15 |  |  |  |  |  |  |
| Extended  Answer Reflection | Nitrogenous Waste | | | | | |

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|  | Changes in an organism’s metabolic activity, in addition to structural features and changes in physiological processes and behaviour, enable the organism to maintain its internal environment within tolerance limits (temperature, nitrogenous waste, water, salts, and gases) | Thermoregulatory mechanisms include structural features, behavioural responses and physiological mechanisms to control heat exchange and metabolic activity; animals can be endothermic or ectothermic | Animals have a variety of behavioural, physiological and structural adaptations to maintain water and salt balance in terrestrial and aquatic environments | To maintain water balance and allow for gas exchange, xerophytes and halophytes have a variety of structural and physiological adaptations |  |
|  |
| Qu1(a) |  | /2 |  |  |  |
| Qu1(b) |  | /2 |  |  |  |
| Qu1(c) |  |  | /8 |  |  |
| Qu2(b) |  |  |  | /4 |  |
| Qu2© |  |  |  | /2 |  |
| Qu2(d) |  |  |  | /4 |  |
| Qu2€ |  |  |  | /2 |  |
| Qu3 |  | /6 |  |  |  |