Human Biology – ATAR Year 12

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

Unit 3 Science Investigating Skills Task

**Investigation – Temperature regulation mechanisms of the human body (50 Marks)**

**Marking Key**

|  |  |  |
| --- | --- | --- |
| **Description** | **Mark** | |
| **Ice Jacket Scenario** | | |
| Questions | **5** | |
| **Introduction (10 Marks)** | | |
| Succinctly writes a general introduction that summarises the aim of the investigation | **1** | |
| Provides background information on temperature control mechanisms and the function of the following in maintaining constant body temperature | **5** | |
| * Vasoconstriction/vasodilation |
| * Shivering |
| * Piloerection |
| * Sweating |
| * Importance of maintaining constant body temperature-optimal for reactions | **1** | |
| Writes a hypothesis relating dependent and independent variables and stating direction of effect **OR** | **3** | |
| Writes a simple hypothesis relating dependent and independent variables without stating direction of effect **OR** | **2** | |
| Correctly identifies the dependent and independent variables | **1** | |
| **Materials and Method (6 Marks)** | | |
| Includes a list of materials used in the investigation | **1** | |
| Includes details on the method used to collect the data | **2** | |
| Includes design features of the investigation that ensured reliability and validity | **3** | |
| **Results (11 Marks)** | | |
| Describes results, compares and contrasts data | **3** | |
| Identifies outliers | **1** | |
| Works out averages | **1** | |
| Plots appropriate graphs to show results: |  | |
| * Appropriate graph (line, column) | 1 | **6** |
| * Title | 1 |
| * Correct labels on correct axes | 1 |
| * Correct scale on axes | 1 |
| * Appropriate units | 1 |
| * Accuracy of plotting | 1 |
| **Analysis and Evaluation (14 Marks)** | | |
| Describes the trend and/or pattern in the data | **2** | |
| States how the data relates to the hypothesis | **2** | |
| Explains the trend and/or pattern of the results | **3** | |
| Comments on the reliability and accuracy of the data collected | **1** | |
| Identifies two limitations in the data collection strategy | **2** | |
| Comments on how it would/could have affected it | **2** | |
| Lists two improvements that could be made to this investigation | **2** | |
| **Conclusion (4 Marks)** | | |
| Summarises the findings | **2** | |
| Comments on the reliability of the outcome | **1** | |
| Comments on the validity of the outcome | **1** | |