**Year 12 Biology**

**Modelling Disease Outbreak**

**Part B: Validation Test**

|  |
| --- |
| Name: |
| Teacher: |

|  |  |  |
| --- | --- | --- |
| Marks Received | Marks Available | Percentage |
| Part A | 15 |  |
| Part B | 27 |  |
| Total | 42 |  |



Weighting 5%

Time 50 minutes

1. Represent your data in the form of a graph/s. (8 marks)
2. In the instructions for this investigation you were asked to plan for reliability. In what way was your data made reliable? (1 mark)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Write a conclusion for each of your hypotheses. (2 marks)

|  |
| --- |
|  |
|  |
|  |
|  |

1. Explain the scientific basis for each of your conclusions. (2 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |

1. Which factor (variable) had a greater effect on the severity of the diseases? Explain why you think this occurred. (2 marks)

|  |
| --- |
|  |
|  |
|  |
|  |

1. For one of the factors you investigated, make a recommendation to the city council to help them reduce the spread of this disease in future. Provide evidence from your investigation. (2 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |

1. Describe any differences in the results of the simulation between the two diseases. Explain why these differences might have occurred. (2 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |

1. Describe **two** benefits of using modelling to predict the outcome of epidemics. (4 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |

1. Describe **two** limitations of using computer simulation models in this way. (4 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |