

**Year 12 General Biology**

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| **Task 4: Extended Response – Genetic Variation Part B** | | | **Weighting**  10% |
| Marks Received | Marks Available | Percentage | |
|  | 20 |  | |

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

**Task 4: Extended Response – Genetic Variation**

**Student Instructions:**

This extended answer is 18 marks and worth 10% of your year grade. You can use your Part A notes and the Part B extended response will be completed under test conditions. You will have 50 minutes to complete Part B based on the research you have made in the previous lesson.

**Extended Response Question:**

1. Genetic variation is a prerequisite for evolution. Mutation is one source of genetic variation and meiosis is another. **Identify** and **explain** how meiosis and mutation produce genetic variation when fertilisation occurs during reproduction. (7 marks)

2. **List** two examples of mutagens and **explain** what mutagens are and how they can affect the genes of an organism. **Explain** whether mutations are normally harmful to an organism or not. (6 marks)

3. **Explain** what natural selection is and what processes contribute to natural selection and how this creates new species. (7 marks)