

2001 HIGHER SCHOOL CERTIFICATE EXAMINATION  
**Biology**

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Centre Number

**Section I – Part B (continued)**

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Student Number

**Marks**

**Question 22** (6 marks)

- (a) Cloning is a technique that could be used to increase numbers in an endangered species. What effect would cloning have on the genetic diversity of the species? **2**

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- (b) Explain TWO possible evolutionary effects of a disease entering an endangered population containing some cloned individuals. **4**

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**Marks**

**Question 23** (3 marks)

In twelfth-century China, people seeking protection from smallpox removed scabs from people mildly scarred from the disease. These scabs were then ground and inhaled as powder. Similarly, in the seventeenth century, an Englishwoman, Mary Montagu, injected bits of smallpox scabs into healthy children to protect them from the disease.

**3**

In the light of our current knowledge about the immune response, explain why these practices were successful.

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**Question 24** (4 marks)

Explain the relationship between the cause and ONE symptom of ONE named non-infectious disease.

**4**

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