

- 8 In 2014 at Longleat Safari Park, a decision was made to humanely kill a female lion and four of her cubs. These lions showed violent and aggressive behaviour to other lions.

These lions had serious genetic defects caused by inbreeding.

- (a) (i) Suggest how inbreeding could have led to genetic defects in these lions.

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(ii) Describe how breeding programmes at zoos are designed to reduce the risk of inbreeding.

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- (b) When the female lion was first brought to Longleat Safari Park, the zookeepers noted symptoms including tremors, uncoordinated movements and aggressive behaviour.

It was thought that these problems were due to a poor diet when she was younger.

Her cubs were given a better diet at Longleat but they had the same symptoms as their mother.

Suggest what could have been the main cause of the problems in these lions.
Give a reason for your answer.

(2)

(Total for Question 8 = 8 marks)

TOTAL FOR PAPER = 80 MARKS

