

OCR

A Level

A Level Biology

Artificial Selection Questions

Name:

M M E

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Total Marks: /13

Artificial Selection

Humans have exploited the principles of evolution for centuries in organisms that provide us with useful products.

1) Artificial selection is a controversial issue with many advantages and disadvantages; it is a practice that has developed along with changing scientific knowledge and techniques.

a)

i) Artificial selection does not always produce an organism with the greatest chance of survival. Explain why. (1 mark)

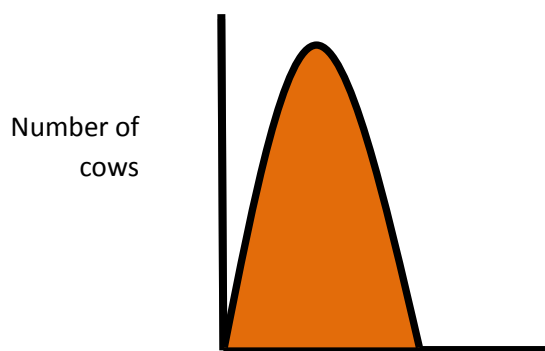
ii) Why does variation have to be present in a population for artificial selection to occur? (1 mark)

iii) What is meant by the idea that a characteristic is genetically determined? (1 mark)

b)

i) Explain the process of artificial selection that may have been employed in order to obtain maximum milk yield from a herd of cows. (4 marks)

ii) The graph below shows milk yield in the cows. Draw a new curve on the graph to show the effect of artificial selection and label on the original graph which cows have been selected to create this new herd (2 marks)



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- iii) What kind of selection is this? (1 mark)

- iv) Identify three characteristics that may be selected for in plants.
(3 marks)