NORTHWEST TERRITORIES LIFE SCIENCES 11 (MLFSC11) · UNIT B · 25 QUESTIONS

Evolution and Natural Selection — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Evolution in a population means a change over generations in**

- A allele frequencies
- B individual height
- C weather patterns
- D learned behaviour

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2 **Natural selection acts most directly on the**

A phenotype of an individual

B age of a species

C fossil record

D climate of a region

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3 **For natural selection to occur, a population must have**

A unlimited food and space

B no predators at all

C variation that can be inherited

D identical individuals

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4 **Overproduction in natural selection means that organisms produce more offspring than can**

A be counted by scientists

B live in one habitat

C eat the same food

D survive to reproduce

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5 **In a dry year, finches with larger beaks crack hard seeds better. These finches are more likely to**

A survive and reproduce

B change their genes at will

C move to a new continent

D stop eating seeds

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6 **An adaptation is best described as a trait that**

A has no effect on fitness

B improves survival or reproduction in an environment

C appears in one lifetime only

D is learned from parents

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7 **Thick fur in an arctic fox is an example of a**

A vestigial structure

B fossil trait

C structural adaptation

D learned behaviour

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8 **Migration by geese each autumn is an example of a**

A structural adaptation

B vestigial structure

C analogous structure

D behavioural adaptation

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9 **A cactus stores water in its stem. This is best classed as a**

A physiological adaptation

B fossil record

C reproductive isolation

D convergent trait

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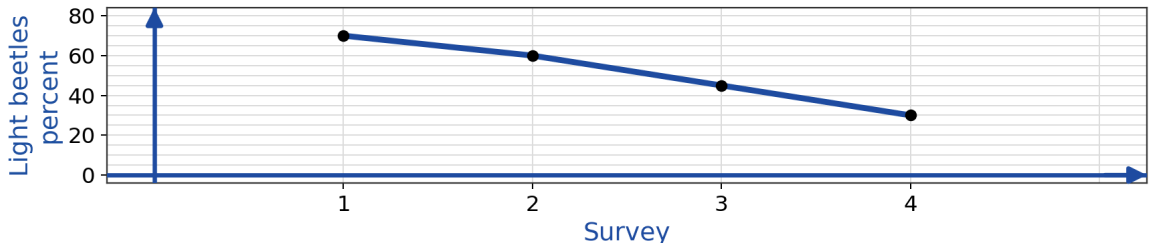
10 **The graph shows the percent of light beetles in a forest over four surveys. Between survey 1 and survey 4, light beetles**



A increased from 10 percent to 90 percent

B decreased from 70 percent to 30 percent

C increased from 30 percent to 70 percent

D stayed at 50 percent

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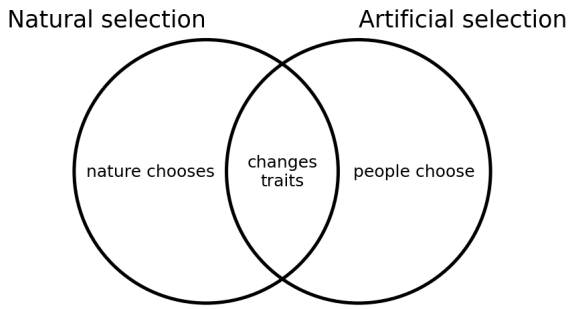
11 **The diagram compares natural selection and artificial selection. The feature shared by both is that they**



A act only on wild animals

B require genetic engineering

C change trait frequencies over generations

D are directed only by farmers

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12 **Speciation occurs when one population splits into two groups that**

- A live in the same nest
- B eat identical food
- C share every allele
- D can no longer interbreed

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13 **Geographic isolation can lead to speciation because a barrier**

- A stops gene flow between groups
- B makes all alleles identical
- C removes all mutations
- D prevents any reproduction

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14 **Two groups of frogs breed in different months. This is an example of**

A genetic drift

B reproductive isolation

C artificial selection

D fossil formation

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15 **Finches on separate islands evolved different beak shapes for different foods. This pattern is called**

A cloning

B gene therapy

C adaptive radiation

D artificial selection

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16 **Homologous structures, such as the forelimbs of whales and bats, provide evidence for evolution because they**

A perform identical jobs

B formed in the same rock

C have no bones at all

D share a common ancestor

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17 **The wing of a bat and the wing of an insect have similar jobs but different origins. They are**

A analogous structures

B homologous structures

C vestigial structures

D fossil structures

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18 **A vestigial structure, such as the human appendix, is best described as a structure that**

A controls all other organs

B has lost most of its original function

C is essential for survival

D appeared only in fossils

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19 **Fossils in older rock layers compared with newer layers show**

A only the age of the rock

B that all species are extinct

C how life has changed over time

D that species never change

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20 **Similar DNA sequences in humans and chimpanzees support the idea that the two species**

- A live in the same habitat
- B eat the same food
- C have identical phenotypes
- D share a recent common ancestor

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21 **Similar embryos in different vertebrates are evidence for**

- A common ancestry
- B artificial selection
- C extinction
- D geographic isolation

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22 **Antibiotic resistance in bacteria increases when resistant bacteria**

- **A** lose all their DNA
- **B** survive treatment and reproduce
- **C** learn to avoid medicine
- **D** stop reproducing entirely

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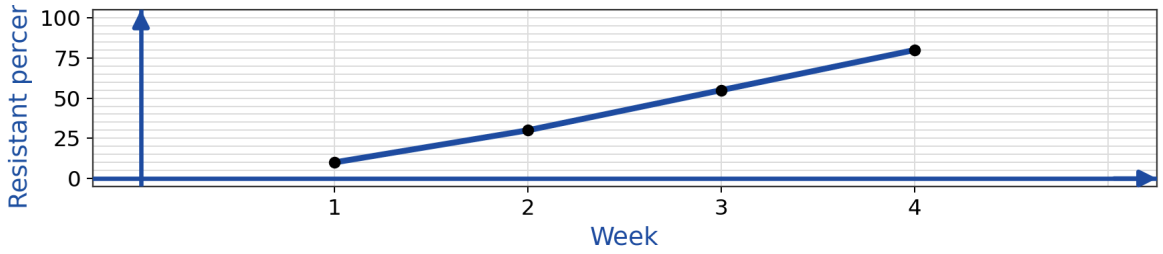
23 **The graph shows resistant bacteria as a percent of a sample over four weeks. In week 4, the percent resistant is**



- **A** 40 percent
- **B** 60 percent
- **C** 80 percent
- **D** 20 percent

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24 **When a small group colonizes a new island, allele frequencies may change by chance. This is called**

A artificial selection

B convergent evolution

C photosynthesis

D genetic drift

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25 **Using the same graph, the increase in resistant percent from week 1 to week 4 is**

ANSWER _____

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ANSWER KEY

1. A
2. A
3. C
4. D
5. A
6. B
7. C
8. D
9. A
10. B
11. C
12. D
13. A
14. B
15. C
16. D
17. A
18. B
19. C
20. D
21. A
22. B
23. C
24. D
25. 70

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