BIOLOGY 3201 · NEWFOUNDLAND AND LABRADOR

Biology 3201

Practice Test

Unit D: Evolution, Change and Diversity

25 Questions

Original practice test based on the Newfoundland and Labrador curriculum. Work through each question, then check your answers at the end.

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.

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Question 1

Natural selection acts directly on an individual′s

A) phenotype

B) genotype only

C) fossils

D) chromosome number only

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Question 2

Variation within a population is mainly produced by mutation and

A) fossil formation

B) migration alone

C) sexual reproduction

D) extinction

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Question 3

A structure with the same basic form in different species but different functions is called

A) analogous

B) vestigial only

C) homologous

D) fossilized

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Question 4

Wings of birds and wings of insects are an example of

A) homologous structures

B) vestigial structures

C) embryonic structures

D) analogous structures

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Question 5

Geographic isolation can lead to speciation because separated populations

A) evolve independently

B) stop mutating

C) share all genes

D) become identical

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Question 6

Reproductive isolation means members of different species

A) never meet

B) do not produce fertile offspring together

C) have identical genes

D) live in the same habitat always

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Question 7

A bottleneck effect is a type of genetic drift caused by a sharp

A) increase in mutation rate

B) change in climate only

C) reduction in population size

D) increase in food supply

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Question 8

The founder effect occurs when a new population is started by a

A) large mixed population

B) single fossil

C) migrating species alone

D) small group of individuals

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Question 9

Gene flow between populations tends to

A) reduce genetic differences

B) increase genetic differences

C) stop evolution

D) cause extinction at once

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Question 10

Antibiotic resistance in bacteria is an example of evolution by

A) artificial selection

B) natural selection

C) fossil dating

D) genetic engineering alone

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Question 11

The fossil record provides evidence of evolution mainly by showing

A) unchanging life forms

B) only living species

C) changes in life over time

D) only extinct species

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Question 12

The classification level that includes the most species is the

A) species

B) genus

C) family

D) kingdom

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Question 13

In binomial nomenclature, the first name gives the

A) genus

B) species

C) family

D) kingdom

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Question 14

Darwin′s observations of finches on the Galapagos Islands suggested that species

A) never change

B) adapt to local conditions

C) arrive fully formed

D) share no ancestors

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Question 15

A vestigial structure is a structure that has

A) gained a new function only

B) never existed

C) lost most of its original function

D) no genetic basis

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Question 16

In a population of 1000, the frequency of the recessive allele^2 is 0.16. The expected number with the recessive phenotype is

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Question 17

In a population of 1000, the frequency of the dominant allele^2 is 0.36. The expected number of homozygous dominant individuals is

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Question 18

Allele frequencies *are* $p = 0.6$ *and* $q = 0.4$. *The* heterozygote frequency $2pq$ *is* 0.48 . *In* 1000 individuals , *the* expected number *of* heterozygotes *is*

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Question 19

A population grows from 200 to 250 individuals. The increase in individuals is

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Question 20

A fossil layer is 3 times as old as a layer dated at 10 million years. The older layer age in millions of years is

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Question 21

A population of 400 loses 80 individuals to emigration. The remaining population size is

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Question 22

In a sample of 500 beetles, 400 are dark and 100 are light. The number of dark beetles per 100 beetles is

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Question 23

A species count falls from 120 to 90. The decrease in species counted is

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Question 24

A population doubles from 150 to 300. The increase as a multiple of the original is 2, but the increase in individuals is

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Question 25

In 2000 individuals, 1 in 10 shows a recessive trait. The number showing the trait is

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ANSWER KEY

1. A
2. C
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. 160
17. 360
18. 480
19. 50
20. 30
21. 320
22. 80
23. 30
24. 150
25. 200

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