NOVA SCOTIA BIOLOGY 12 · UNIT D

Evolution, Change and Diversity — Practice Test

Nova Scotia Biology 12 • 25 questions

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 **A population of 200 organisms grows by 10 percent in one year. The new population is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A population of 500 organisms grows by 20 percent in one year. The new population is**

ANSWER _____

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3 **A population of 100 organisms grows by 50 percent in one year. The new population is**

ANSWER _____

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4 **In a gene pool of 200 alleles, 120 are the A allele. The percent of A alleles is**

ANSWER _____

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5 **In a gene pool of 100 alleles, 75 are the A allele. The percent of A alleles is**

ANSWER _____

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6 **In a gene pool of 400 alleles, 100 are the A allele. The percent of A alleles is**

ANSWER _____

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7 **A fossil sample starts with 100 grams of a radioactive isotope. After 2 half lives the mass remaining, in grams, is**

ANSWER _____

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8 **A fossil sample starts with 100 grams of a radioactive isotope. After 3 half lives the mass remaining, in grams, is**

ANSWER _____

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9 **A fossil sample starts with 80 grams of a radioactive isotope. After 1 half lives the mass remaining, in grams, is**

ANSWER _____

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10 **A population of 1000 bacteria is treated with an antibiotic that kills 99 percent. The number that survive is**

ANSWER _____

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11 **A population of 2000 bacteria is treated with an antibiotic that kills 95 percent. The number that survive is**

ANSWER _____

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12 **A population of 500 bacteria is treated with an antibiotic that kills 90 percent. The number that survive is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A species has a generation time of 5 years. The number of generations in 100 years is**

ANSWER _____

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14 **A species has a generation time of 2 years. The number of generations in 100 years is**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A species has a generation time of 10 years. The number of generations in 100 years is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **An area has 200 species in total and 20 of them are mammals. The percent that are mammals is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **An area has 500 species in total and 50 of them are mammals. The percent that are mammals is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **An area has 100 species in total and 25 of them are mammals. The percent that are mammals is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **Natural selection acts on**

A variation already present in a population

B variation created by need

C identical individuals

D acquired traits only

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20 **Darwin proposed that species change over time mainly by**

A inheritance of acquired traits

B natural selection

C sudden creation

D migration only

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21 **Homologous structures provide evidence for evolution because they show**

A identical functions

B unrelated species

C common ancestry with different functions

D recent migration

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22 **A vestigial structure is a structure that**

A is newly evolved

B is found only in fossils

C controls behaviour

D has lost most of its original function

Understand It with Pulse | Flag a mistake

23 **Geographic isolation can lead to speciation when separated populations**

A evolve independently and can no longer interbreed

B stay identical

C migrate together

D share all genes

Understand It with Pulse | Flag a mistake

24 **Fossils in deeper rock layers are generally**

A younger than fossils in higher layers

B older than fossils in higher layers

C the same age

D unrelated to age

Understand It with Pulse | Flag a mistake

25 **Antibiotic resistance spreads because resistant bacteria**

A learn to fight antibiotics

B mutate on purpose

C survive treatment and reproduce

D are created by antibiotics

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	220	**10.**	10	**19.**	A
2.	600	**11.**	100	**20.**	B
3.	150	**12.**	50	**21.**	C
4.	60	**13.**	20	**22.**	D
5.	75	**14.**	50	**23.**	A
6.	25	**15.**	10	**24.**	B
7.	25	**16.**	10	**25.**	C
8.	12.5	**17.**	10		
9.	40	**18.**	25		

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