Evolution, Change and Diversity — Practice Test

Nova Scotia Advanced 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 grows by 10 percent each year for 2 years. The population after 2 years is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A population of 100 grows by 10 percent each year for 2 years. The population after 2 years is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A population of 500 grows by 10 percent each year for 2 years. The population after 2 years is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **In a gene pool of 1000 alleles, 250 are the A allele. The percent of A alleles is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **In a gene pool of 300 alleles, 90 are the A allele. The percent of A alleles is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **In a gene pool of 800 alleles, 600 are the A allele. The percent of A alleles is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **A fossil sample starts with 200 grams of a radioactive isotope. After 3 half lives the mass left, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **A fossil sample starts with 160 grams of a radioactive isotope. After 4 half lives the mass left, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **A fossil sample starts with 50 grams of a radioactive isotope. After 2 half lives the mass left, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A population of 5000 bacteria is treated with an antibiotic that kills 99 percent. The survivors number**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **A population of 3000 bacteria is treated with an antibiotic that kills 98 percent. The survivors number**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **A population of 800 bacteria is treated with an antibiotic that kills 95 percent. The survivors number**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A species has a generation time of 25 years. The generations in 100 years number**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **A species has a generation time of 8 years. The generations in 200 years number**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A species has a generation time of 15 years. The generations in 300 years number**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **An area has 1000 species in total and 125 of them are birds. The percent that are birds is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **An area has 800 species in total and 200 of them are birds. The percent that are birds is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **An area has 600 species in total and 150 of them are birds. The percent that are birds is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19

Stabilising selection favours

A average phenotypes over extremes

B both extremes

C new mutations

D larger individuals only

Understand It with Pulse | Flag a mistake

20

Disruptive selection favours

A only the average

B both extreme phenotypes over the average

C only one extreme

D no phenotype

Understand It with Pulse | Flag a mistake

21 **Genetic drift has the largest effect in**

A large populations

B stable populations

C small populations

D migrating populations only

Understand It with Pulse | Flag a mistake

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

A a large migration

B a mutation

C a fossil layer

D a small number of individuals

Understand It with Pulse | Flag a mistake

23 **Adaptive radiation is the rapid evolution of many species from**

- **A** a common ancestor into different niches
- **B** one species into clones
- **C** unrelated ancestors
- **D** fossils only

Understand It with Pulse | Flag a mistake

24 **Molecular evidence for evolution includes comparing**

- **A** fossil colours
- **B** DNA and protein sequences between species
- **C** bone sizes only
- **D** behaviour only

Understand It with Pulse | Flag a mistake

25 **Punctuated equilibrium proposes long periods of stability interrupted by**

A slow steady change

B extinction only

C rapid change

D migration

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	242	**10.**	50	**19.**	A
2.	121	**11.**	60	**20.**	B
3.	605	**12.**	40	**21.**	C
4.	25	**13.**	4	**22.**	D
5.	30	**14.**	25	**23.**	A
6.	75	**15.**	20	**24.**	B
7.	25	**16.**	12.5	**25.**	C
8.	10	**17.**	25		
9.	12.5	**18.**	25		

© 2026 Brett Robbins. All Rights Reserved.