PRINCE EDWARD ISLAND BIOLOGY 12 · UNIT D

Evolution — Practice Test

Prince Edward Island 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 **In a population, the frequency of allele A is 0.6. Under Hardy Weinberg assumptions, the frequency of allele a as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **In a population, the frequency of allele A is 0.7. Under Hardy Weinberg assumptions, the frequency of allele a as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **In a population, the frequency of allele A is 0.8. Under Hardy Weinberg assumptions, the frequency of allele a as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **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

5 **A fossil sample starts with 160 grams of an isotope. After 3 half lives the mass in grams is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **Natural selection acts on**

A heritable variation in a population

B individual wishes

C acquired traits only

D fossils only

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7 Stabilizing selection favours

- A both extremes
- B new mutations
- C larger individuals only
- D average phenotypes over extremes

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8 Directional selection favours

- A both extremes equally
- B no phenotype
- C one extreme phenotype
- D the average only

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9

Disruptive selection favours

A no phenotype

B both extreme phenotypes over the average

C only the average

D only one extreme

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10

Genetic drift has the largest effect in

A small populations

B large populations

C stable populations

D migrating populations only

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

- **A** large migration
- **B** mutation
- **C** fossil layer
- **D** small number of individuals

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12 **Homologous structures are evidence of**

- **A** identical environments
- **B** recent mutation only
- **C** common ancestry
- **D** convergent evolution only

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13 **Analogous structures arise by**

A artificial selection

B convergent evolution

C common ancestry

D genetic drift

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14 **Speciation requires**

A reproductive isolation

B identical habitats

C increased mutation only

D larger population size only

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15 **The fossil record provides evidence of**

A current populations only

B DNA sequences only

C future evolution

D change over geological time

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16 **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

17 **A species has a generation time of 20 years. The generations in 100 years number**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **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

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

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **If allele frequency p = 0.6 , then p^2 as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **If allele frequencies are 0.6 and 0.4, the heterozygote frequency 2pq as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A population of 300 grows by 20 percent each year for 2 years. The population after 2 years is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A fossil sample starts with 80 grams of an isotope. After 4 half lives the mass in grams is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **In a gene pool of 200 alleles, 50 are the A allele. The percent of A alleles is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **If allele frequency p = 0.8 , then q^2 as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 0.4
2. 0.3
3. 0.2
4. 242
5. 20
6. A
7. D
8. C
9. B
10. A
11. D
12. C
13. B
14. A
15. D
16. 25
17. 5
18. 50
19. 25
20. 0.36
21. 0.48
22. 432
23. 5
24. 25
25. 0.04

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