NOVA SCOTIA BIOLOGY 12 · UNIT C

Genetic Continuity — 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 **In a cross, 400 offspring are produced and one quarter are expected to show the recessive trait. The expected number with the recessive trait is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **In a cross, 200 offspring are produced and one quarter are expected to show the recessive trait. The expected number with the recessive trait is**

ANSWER _____

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3 **In a cross, 800 offspring are produced and one quarter are expected to show the recessive trait. The expected number with the recessive trait is**

ANSWER _____

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4 **In a dihybrid cross 1600 offspring are produced. One sixteenth are expected to show both recessive traits. The expected number is**

ANSWER _____

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5 **In a dihybrid cross 800 offspring are produced. One sixteenth are expected to show both recessive traits. The expected number is**

ANSWER _____

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6 **In a dihybrid cross 3200 offspring are produced. One sixteenth are expected to show both recessive traits. The expected number is**

ANSWER _____

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7 **In a DNA sample adenine makes up 30 percent of the bases. The percent that is guanine is**

ANSWER _____

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8 **In a DNA sample adenine makes up 20 percent of the bases. The percent that is guanine is**

ANSWER _____

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9 **In a DNA sample adenine makes up 40 percent of the bases. The percent that is guanine is**

ANSWER _____

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10 **A messenger RNA molecule has 90 bases. The number of codons it contains is**

ANSWER _____

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11 **A messenger RNA molecule has 120 bases. The number of codons it contains is**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **A messenger RNA molecule has 60 bases. The number of codons it contains is**

ANSWER

Understand It with Pulse | Flag a mistake

13 **An organism is heterozygous for 2 gene pairs. The number of different gamete types it can produce is**

ANSWER

Understand It with Pulse | Flag a mistake

14 **An organism is heterozygous for 3 gene pairs. The number of different gamete types it can produce is**

ANSWER

Understand It with Pulse | Flag a mistake

15 **An organism is heterozygous for 4 gene pairs. The number of different gamete types it can produce is**

ANSWER

Understand It with Pulse | Flag a mistake

16 **In a population 16 percent show a recessive trait. The percent expected to be heterozygous carriers is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **In a population 25 percent show a recessive trait. The percent expected to be heterozygous carriers is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **In a population 4 percent show a recessive trait. The percent expected to be heterozygous carriers is**

ANSWER _____

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19 **The observable trait of an organism is its**

A phenotype

B genotype

C allele

D chromosome

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20 **Two alleles for a gene that are different make an organism**

A homozygous

B heterozygous

C haploid

D polyploid

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21 **DNA replication produces**

A one RNA molecule

B four different DNA molecules

C two identical DNA molecules

D proteins directly

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22 **Transcription copies DNA into**

A a protein

B a new DNA strand

C a ribosome

D messenger RNA

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23 **Translation builds a protein at the**

- A ribosome
- B nucleus
- C mitochondrion
- D Golgi body

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24 **A mutation is a change in the**

- A cell membrane only
- B DNA base sequence
- C ribosome number
- D protein shape only

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25 **In a pedigree, a shaded symbol usually represents a person who**

A is a carrier only

B is unaffected

C shows the trait

D is deceased only

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	100	**10.**	30	**19.**	A
2.	50	**11.**	40	**20.**	B
3.	200	**12.**	20	**21.**	C
4.	100	**13.**	4	**22.**	D
5.	50	**14.**	8	**23.**	A
6.	200	**15.**	16	**24.**	B
7.	20	**16.**	48	**25.**	C
8.	30	**17.**	50		
9.	10	**18.**	32		

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