BIOLOGY 3201 · NEWFOUNDLAND AND LABRADOR

Biology 3201
Practice Test

Unit C: Genetic Continuity

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

An organism′s observable traits are called its

A) phenotype

B) genotype

C) karyotype

D) allele pair

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Question 2

The genetic makeup of an organism is called its

A) genotype

B) phenotype

C) chromosome

D) mutation

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Question 3

An organism with two identical alleles for a gene is

A) heterozygous

B) hemizygous

C) homozygous

D) polyploid

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Question 4

An organism with two different alleles for a gene is

A) homozygous

B) haploid

C) diploid only

D) heterozygous

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Question 5

In a cross between two heterozygous parents for a dominant trait, the expected ratio of dominant to recessive offspring is

A) 3 to 1

B) 1 to 1

C) 1 to 3

D) 4 to 0

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Question 6

A recessive trait is expressed only when an organism has

A) one dominant allele

B) two recessive alleles

C) one recessive allele

D) no alleles

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Question 7

In humans, females normally have sex chromosomes

A) XY

B) YY

C) XX

D) XO only

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Question 8

In humans, males normally have sex chromosomes

A) XX

B) YY

C) XO only

D) XY

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Question 9

Hemophilia is an example of a trait carried mainly on the

A) X chromosome

B) Y chromosome

C) chromosome 21 only

D) mitochondrial DNA only

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Question 10

In DNA, adenine always pairs with

A) guanine

B) thymine

C) cytosine

D) uracil

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Question 11

In DNA, guanine always pairs with

A) adenine

B) thymine

C) cytosine

D) uracil

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Question 12

The shape of a DNA molecule is best described as a

A) single helix

B) flat sheet

C) triple helix

D) double helix

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Question 13

Transcription is the process of copying DNA into

A) messenger RNA

B) protein directly

C) DNA only

D) amino acids only

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Question 14

Translation occurs at the

A) nucleus

B) ribosome

C) Golgi body

D) lysosome

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Question 15

A codon is a sequence of how many bases on messenger RNA?

A) 2 bases

B) 4 bases

C) 3 bases

D) 1 base

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Question 16

In a cross of two heterozygous parents, 400 offspring are expected. The expected number showing the recessive trait is

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Question 17

In a cross of two heterozygous parents, 400 offspring are expected. The expected number showing the dominant trait is

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Question 18

A DNA sample has 1000 bases and 30 percent are adenine. The number of thymine bases is

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Question 19

A DNA sample has 1000 bases and 20 percent are guanine. The number of cytosine bases is

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Question 20

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

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Question 21

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

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Question 22

A dihybrid cross gives a 9 to 3 to 3 to 1 ratio. In 1600 offspring, the expected number showing both dominant traits is

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Question 23

A population has 500 people and 1 in 5 is a carrier. The number of carriers is

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Question 24

A gene has 600 base pairs. The number of single bases in the gene is

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Question 25

A family has 8 children and the probability of a recessive child is 1 in 4. The expected number of recessive children is

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ANSWER KEY

1. A
2. A
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. 100
17. 300
18. 300
19. 200
20. 30
21. 40
22. 900
23. 100
24. 1200
25. 2

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