Fundamentals of Genetics

Genetics · Answer Key · 8 Questions

1. Which molecule carries the genetic instructions for the development and function of living organisms?

A) RNA
B) DNA
C) Protein
D) Lipid

2. In humans, how many pairs of chromosomes are typically found in the nucleus of a somatic cell?

A) 12
B) 23
C) 46
D) 50

3. What are the 'rungs' of the DNA double helix ladder composed of?

A) Sugar molecules
B) Phosphate groups
C) Nitrogenous base pairs
D) Amino acids

4. Which term describes an individual who has two identical alleles for a particular gene?

A) Heterozygous
B) Homozygous
C) Dominant
D) Recessive

5. Who is widely considered the father of modern genetics due to his experiments with pea plants?

A) Charles Darwin
B) Gregor Mendel
C) Louis Pasteur
D) James Watson

6. What is the specific physical location of a gene on a chromosome called?

A) Locus
B) Allele
C) Genotype
D) Phenotype

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7. Which nitrogenous base is found in DNA but is replaced by uracil in RNA?

A) Adenine
B) Guanine
C) Cytosine
D) Thymine

8. What term refers to the observable physical characteristics of an organism resulting from its genotype?

A) Phenotype
B) Mutation
C) Allele
D) Genome

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