

# Module 09 Quiz: Inheritance

Name: \_\_\_\_\_ Date: \_\_\_\_\_

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## Part A: Multiple Choice (7 points)

*Choose the best answer for each question. (1 point each)*

1. An organism with two different alleles for a trait is:
  2. A) Homozygous
  3. B) Heterozygous
  4. C) Dominant
  5. D) Recessive
6. The physical appearance of an organism is its:
  7. A) Genotype
  8. B) Phenotype
  9. C) Allele
  10. D) Chromosome
11. In a cross between two heterozygous individuals ( $Aa \times Aa$ ), what fraction of offspring will show the recessive phenotype?
  12. A)  $1/4$
  13. B)  $1/2$
  14. C)  $3/4$
  15. D) All
16. A cross between a red flower (RR) and white flower (WW) produces all pink offspring. This is an example of:

- 17. A) Complete dominance
  - 18. B) Incomplete dominance
  - 19. C) Codominance
  - 20. D) Polygenic inheritance
  - 21. A trait that appears more commonly in males is likely:
    - 22. A) Autosomal dominant
    - 23. B) Autosomal recessive
    - 24. C) X-linked recessive
    - 25. D) Y-linked
  - 26. Blood type AB demonstrates:
    - 27. A) Complete dominance
    - 28. B) Incomplete dominance
    - 29. C) Codominance
    - 30. D) Simple dominance
  - 31. In a pedigree, a filled-in circle represents:
    - 32. A) An affected male
    - 33. B) An affected female
    - 34. C) A carrier
    - 35. D) An unaffected individual
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## **Part B: Free Response (3 points)**

*Answer each question in complete sentences.*

- 1. (1 point) If a father is homozygous dominant (BB) and a mother is homozygous recessive (bb), predict the genotype and phenotype of their offspring.
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1. (1 point) Explain why color blindness is more common in males than females.

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1. (1 point) Distinguish between genotype and phenotype using a specific example.

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