

Unit 6

Study Guide

Name

Date

Period

Directions: There are 5 major sections for this unit. Fill in the following information below as a study guide for your unit 6 exam. You will receive 5 extra credit points on your test if you turn this in 100% completed on the day of the exam. Your responses need to be close to the real answer and all questions must be answered to receive credit.

PART 1: Mendelian Genetics (Lessons 6.1, 6.2 and 6.3):

1. Define genetics.
2. What plant did Mendel use to construct his laws of genetics?
3. Why did he choose the plants from #2?
4. What does Mendel's law of independent assortment state?
5. What does it mean for a trait to be dominant? Give an example to aid your explanation.
6. What does it mean for a trait to be recessive? Give an example.
7. What is Mendel's law of segregation?
8. When solving problems in genetics, you are often asked to create a Punnett square to determine the genotypes and phenotypes of the offspring. What is the difference between the phenotype and the genotype of an individual?
9. Explain the difference between a homozygous genotype and a heterozygous genotype. Give an example of each.
10. What is an allele? Give an example of two alleles for a trait.
11. Name three patterns we have learned that do not follow Mendel's laws of inheritance.
12. How is a monohybrid cross different from a dihybrid cross?

PART 2: Codominance (Lesson 6.5 and 6.7):

13. Blood type AB is often used as an example of codominance. Why is this an example of codominance?

14. Complete the following table for human blood types.

Blood Type	Phenotype	Genotype	Antigens	Drawing Red Blood Cell
A				

PART 3: Sex-linked Inheritance(Lesson 6.6 and 6.7):

15. What does it mean a trait is said to be sex-linked?

16. Sex-linked traits are passed down on what chromosome number in humans?

17. Do males or females more often exhibit recessive sex-linked disorders?

18. What are 2 recessive disorders we learned about that are sex-linked?

19. What term do biologists use for chromosomes that are not sex chromosomes?

20. What are the sex chromosomes for a male? What are the sex chromosomes for a female?

Male- Female-

PART 4: Incomplete Dominance(Lesson 6.6 and 6.7)

21. Define incomplete dominance.

22. How many phenotypes are exhibited in incomplete dominance?

23. A common garden flower is the snapdragon. The flowers are often white, pink, and red. What are the genotypes of each of the different colored flowers?

24. If two pink flowers are crossed, what is the percentage of the phenotypes of the offspring? (Hint: a Punnett square will help)

PART 5: Genetic Disorders(Lesson 6.9):

25. Duchene’s muscular dystrophy is a genetic disorder. What does this mean?

27. Describe at least 6 things you learned about your genetic disorder. (Include genetic information, symptoms, treatments, etc.).

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