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

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

Score:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Biology Test – Module #8

Matching: Match each term with the correct definition. (2 pts)

|  |  |
| --- | --- |
| 1. \_\_\_\_ allele | 1. Chromosomes that determine the sex of an individual |
| 1. \_\_\_\_ genotype | 1. A genotype in which both alleles are identical |
| 1. \_\_\_\_ phenotype | 1. A genotype with two different alleles |
| 1. \_\_\_\_ homozygous genotype | 1. A protein that, when introduced in the blood, triggers the production of an antibody |
| 1. \_\_\_\_ heterozygous genotype | 1. One of a pair of genes that occupies the same position on homologous chromosomes |
| 1. \_\_\_\_ pedigree | 1. Chromosomes that do not determine the sex of an individual |
| 1. \_\_\_\_ autosomes | 1. Two-letter set that represents the alleles an organism possesses for a certain trait |
| 1. \_\_\_\_ sex chromosome | 1. A person who is heterozygous in a recessive genetic disorder |
| 1. \_\_\_\_ genetic disease carrier | 1. The observable expression of an organism’s genes |
| 1. \_\_\_\_ antigen | 1. A diagram that follows a particular phenotype through several generations |

True or false: Determine whether each statement is true or false. (2 pts)

1. \_\_\_\_ Humans have 23 pairs of chromosomes.
2. \_\_\_\_ Hemophilia is a sex-linked trait.
3. \_\_\_\_ It is impossible for two traits to express codominance.
4. \_\_\_\_ Gregor Mendel is known as the “father of genetics.”
5. \_\_\_\_ Mendel performed his experiments with bean plants.

Punnet Squares: Complete each Punnet Square (4 pts)

|  |  |  |
| --- | --- | --- |
|  | **T** | **t** |
| **T** |  |  |
| **T** |  |  |

|  |  |  |
| --- | --- | --- |
|  | **B** | **B** |
| **b** |  |  |
| **b** |  |  |

|  |  |  |
| --- | --- | --- |
|  | **XC** | **Y** |
| **Xc** |  |  |
| **Xc** |  |  |

Multiple choice: Determine which option is the best answer. (3 pts)

1. \_\_\_\_ What kind of plant did where the first genetic experiments done on?
   1. Bean plants
   2. Potato plants
   3. Pea plants
   4. Tomato plant
2. \_\_\_\_ If you would breed a purebred short pea plant (pp) with a purebred tall pea plant (TT) what would be the percentage of having a purebred short pea plant?
   1. 25%
   2. 75%
   3. 50%
   4. 0%
3. \_\_\_\_ If you would have brown eyed father (Bb) and a blue eyed mother (bb) what would be the percentage of having a blue eyed child?
   1. 25%
   2. 50%
   3. 75%
   4. 0%

Extra Credit: What country did Gregor Mendel come from? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(5 pts)