**Study Guide – Genetics Test**

**Directions**: Glue this handout onto one page and write your answers to the following questions on the next page.

**Define the following terms:**

1. Genetics

2. Asexual Reproduction

3. Dominant

4. Gene

5. Genotype

6. Hybrid (Heterozygous)

7. Incomplete Dominance

8. Phenotype

9. Probability

10. Purebred (Homozygous)

11. Recessive

12. Sex-Linked Traits

13. Sexual Reproduction

14. Trait

15. Allele

16. Fertilization

**Answer the following in complete sentences:**

17. A pea plant can have yellow pods or green pods. If a pea plant has yellow pods and the genotype, Yy, the y stands for what type of pod?

18. If a purebred curly hair parent is crossed with a purebred straight hair parent and all their offspring have wavy hair, what is this an example of?

19. Who was Gregor Mendel? What is he known for?

20. Why did Mendel study pea plants and not another organism (like humans)?

21. What are three types of ways an organism can reproduce asexually? Define them.

22. Compare/contrast meiosis and mitosis in a Venn Diagram.

23. If you have a gene for a disease but DO NOT have the disease present in your body, you are considered what?

24. If a child is born with a disease but neither parent has symptoms of the disease, create a punnett square to show how this is possible (use G, g for your punnett square).

25. Round shaped eyes (R) are dominant to almond shaped eyes (r). Create a punnett square for a hybrid crossed with a purebred dominant parent.

a. Besides being told in the problem, how would you know which trait is dominant and which trait is recessive?

b. What are the Genotypes and their Probabilities (percentages) for the offspring?

c. What are the Phenotypes and their Probabilities (percentages) for the offspring?

26. \_\_\_\_\_\_\_\_ describes a trait that is controlled by genes on the X and Y chromosomes.

27. During asexual reproduction, how much of the genetic information is passed to the offspring?

28. How many parent cells are there during asexual reproduction?

29. A bee transfers pollen to another flower. What type of reproduction is this an example of?

30. Gametes are sex cells (sperm/egg). How many chromosomes do humans have in the gamete cells?