

## OUTLINE QUIZ CH. 10: SEXUAL REPRODUCTION and GENETICS

### PART 2

1. \_\_\_\_\_ is regarded as the father of genetics.
2. In 1866, Gregor Mendel, an Austrian \_\_\_\_\_ and a plant breeder, published his findings on the method of \_\_\_\_\_ in \_\_\_\_\_ plants.
3. Mendel explained how a(n) \_\_\_\_\_ allele can mask the presence of a(n) \_\_\_\_\_ allele.
4. Pea plants are \_\_\_\_\_, meaning that they consistently produce offspring with only one form of a trait.
5. Pea plants can be \_\_\_\_\_, which Mendel performed by transferring a male gamete from the flower of one pea plant to the female reproductive organ in a flower of another pea plant.
6. Pea plants usually reproduce by \_\_\_\_\_, which occurs when a male gamete within a flower combines with a female gamete in the same flower.
7. The passing of traits to the next generation is called \_\_\_\_\_, or \_\_\_\_\_.
8. The study of \_\_\_\_\_ is the science of heredity.
9. Mendel called the true breeding plants that he cross-pollinated the \_\_\_\_\_ generation – also known as the \_\_\_\_\_ generation.
10. Mendel decided to investigate whether the trait that seemed to have disappeared in the F1 generation was no longer present or whether it was \_\_\_\_\_, or \_\_\_\_\_.
11. Mendel planted the F1 generation seeds then allowed the plants to grow and \_\_\_\_\_ - the offspring he collected showed an almost perfect \_\_\_\_\_ ratio of one form of the trait to the other.
12. Mendel studied seven different traits - \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ - and found that the F2 generation from these crosses always showed a(n) \_\_\_\_\_ ratio.
13. The offspring created from the seeds formed by a P cross are called the \_\_\_\_\_ (\_\_\_\_\_) generation.
14. The offspring created from the seeds formed by an F1 cross are called the \_\_\_\_\_ (\_\_\_\_\_) generation.
15. To prevent \_\_\_\_\_ in his P generation, Mendel removed the male organs from the flower of one of the plants.
16. An allele is defined as an alternative form of a single \_\_\_\_\_ passed from generation to generation.
17. Mendel called the form of a trait that \_\_\_\_\_ in the F1 generation dominant and the form of the trait that was \_\_\_\_\_ in the F1 generation recessive.
18. Mendel concluded that the 3:1 ratio observed during his experiments could be explained if the alleles were \_\_\_\_\_ in each of the plants.
19. Mendel concluded that there must be \_\_\_\_\_ forms of each trait in the pea plants, and that each was controlled by a(n) \_\_\_\_\_, which is now called a(n) \_\_\_\_\_.
20. An organism with two of the same alleles for a particular trait is \_\_\_\_\_ for that trait; an organism with two different alleles for a particular trait is \_\_\_\_\_ for that trait.
21. An organism's allele pairs are called its \_\_\_\_\_; the observable characteristic or outward expression of an allele pair is called the \_\_\_\_\_.
22. Because the chromosome number is divided in half during meiosis, the resulting gametes contain \_\_\_\_\_ of the pair of alleles for a particular trait.
23. Heterozygous organisms are called \_\_\_\_\_.
24. Mendel's law of segregation states that the two alleles for each trait separate during \_\_\_\_\_. During \_\_\_\_\_, two alleles for that trait unite.
25. When alleles are present in the heterozygous state, the \_\_\_\_\_ trait will be observed.