

Biology Study Guide

VOCABULARY

Directions: Define each word using complete sentences.

1. allele
2. dominant
3. fertilization
4. gamete
5. genetics
6. genotype
7. heredity
8. heterozygous
9. homozygous
10. hybrid
11. law of independent assortment
12. law of segregation
13. phenotype
14. pollination
15. recessive
16. trait
17. crossing over
18. diploid
19. egg
20. recombination
21. haploid
22. homologous chromosome
23. meiosis
24. nondisjunction
25. Sexual reproduction
26. sperm
27. zygote
28. active transport
29. endocytosis
30. exocytosis

31. facilitated diffusion
32. hypertonic solution
33. hypotonic solution
34. isotonic solution
35. osmosis
36. passive transport
37. cell cycle
38. centriole
39. chromosome
40. mitosis
41. organ
42. organ tissue
43. tissue
44. gene
45. cancer

SHORT ANSWER QUESTIONS

DIRECTIONS: Answer each question using complete sentences.

1. Meiosis results in the direct production of what?
2. If a species normally has 46 chromosomes, what will the cells it produces by meiosis each have?
3. What does an organism have to be in order for it to be recessive?
4. What is the process that results in Down syndrome called?
5. During what phase of meiosis do homologous chromosomes crossover?
6. What is an organism called that has two different alleles for a trait?
7. During what phase of meiosis do sister chromatids separate?
8. What is the trait called when it is hidden in a heterozygous condition?
9. What did Mendel do when he transferred pollen from one pea plant to another?
10. What is an organism that is true breeding for a trait called?
11. At the end of meiosis, how many haploid cells have been formed from the original cell?
12. What type of transport requires energy?
13. What is a segment of DNA that controls the production of protein?
14. What kind of environment is described when the concentration of dissolved substances is greater outside the cell than inside the cell?
15. An organ consists of many kinds of what?
16. An amoeba ingests large food particles by what process?

17. Considering the surface area to volume ratio, what structure does surface area represent?
18. Chromosomes are made of what?
19. If a cell that has eight chromosomes goes through mitosis, how many chromosomes will the daughter cells have?
20. What limits cell size?
21. What type of solution is created when sprinkling sugar on a bowl of strawberries?
22. During what stage are chromosomes replicated of the cell cycle?
23. During what phase is most of the cell's life spent carrying on activities?
24. How is osmosis defined?
25. What happens during interphase?
26. What are some causes of cancer?
27. What happens to a red blood cell when it is placed in a 3% salt solution?
28. What happens to the cells of produce when sprayed with water?
29. What is present only in animal cells?
30. What is inside cells contain DNA and become darkly colored when stained?
31. In what ways do enzymes control cells?
32. What can cause the cell cycle to become uncontrolled?
33. What is the relationship between environmental factors and cancer?
34. What four types of cancer are the most prevalent?
35. What directs the production of the enzyme that control the cell cycle?
36. What can result when the cell cycle becomes uncontrolled?
37. What is a tumor? Describe the final stages of cancer.
38. What is the offspring of self-pollinated F1 generation plants called?
39. What is the fusion of male and female sex cells called?
40. What is a gene?
41. What is the outward appearance of an organism, regardless of its genes called?
42. What is the trait of an organism that can be masked by the dominant form of that trait called?
43. What are paired chromosomes with genes for the same traits arranged in the same order called?
44. What is heterozygous?
45. What are all combinations of genes in an organism called?
46. What is the branch of biology that studies heredity?