Name _____ Class _____ Date _____

Skills Worksheet

Test Prep Pretest

Ch 6 & 7 Asmt_____

In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

_____ 1. As a cell prepares to divide, a DNA molecule and its associated proteins coil to form a
- a. chromatid.
- b. gene.
- c. chromosome.
- d. centromere.

_____ 2. What is the number of chromosomes found in a human body cell?
- a. 23
- b. 46
- c. 48
- d. 64

_____ 3. The sex of a human offspring is determined by
- a. the female.
- b. the male.
- c. both the female and the male.
- d. neither the female nor the male.

_____ 4. Bacteria reproduce through an asexual process called
- a. meiosis.
- b. cytokinesis.
- c. interphase.
- d. binary fission.

_____ 5. In plant cells, cytokinesis requires the formation of a new
- a. Golgi apparatus.
- b. cell wall.
- c. centromere.
- d. series of protein threads.

_____ 6. Gene mutations that result in cancer often cause the
- a. overproduction of growth-promoting proteins.
- b. underproduction of growth-promoting proteins.
- c. activation of control proteins that slow or stop the cell cycle.
- d. Both (a) and (c)

_____ 7. Which of the following is NOT part of the spindle apparatus in animal cells?
- a. microtubules
- b. belt of protein threads
- c. spindle fibers
- d. centrioles

Complete each statement by writing the correct term or phrase in the space provided.

8. A(n) _____ is a segment of DNA that transmits information from parent to offspring.

9. An individual with an extra copy of chromosome 21 demonstrates traits collectively known as _____ _____ .

10. The 22 pairs of chromosomes in human somatic cells that are the same in males and females are called _____ .

11. The human chromosomes that determine an individual's sex are called the _____ _____ .

Questions 12–17 refer to the sequence below.

$$G_1 \longrightarrow S \longrightarrow G_2 \longrightarrow M \longrightarrow C$$

12. The sequence above represents the _____ _____ .

13. The *S* in the sequence represents the phase in which _____ _____ occurs.

14. Phases G_1, S, and G_2 in the sequence above are collectively called _____ .

15. Each individual protein structure that helps to move the chromosomes apart during mitosis is called a(n) _____ .

16. A disease caused by uncontrolled cell division is _____ .

17. In the first stage of binary fission, the DNA is _____ .

Read each question, and write your answer in the space provided.

18. What happens to the structure of DNA in your cells prior to cell division?

Test Prep Pretest *continued*

19. Explain the difference in the number of chromosomes between a frog somatic cell and a frog egg cell.

20. What happens when nondisjunction takes place during cell division?

21. Describe what happens at each checkpoint during the cell cycle.

22. What are the four stages of mitosis in the correct order?

23. Explain the events that take place during each stage of mitosis.

24. Describe the events that take place during each phase of interphase.

25. List four types of events that take place in a eukaryotic organism, such as a deer, that require cell division.

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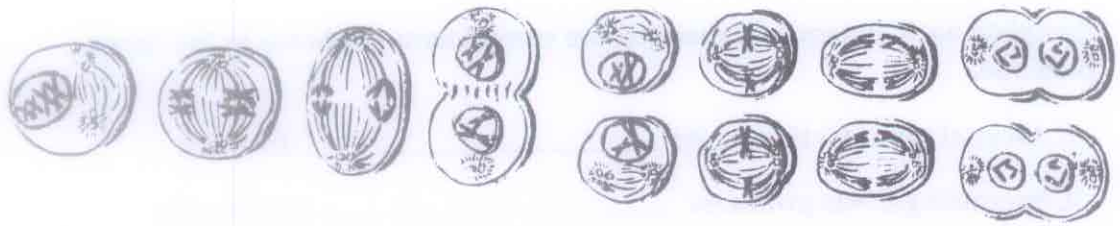
Complete each statement by writing the correct term or phrase in the space provided.

1. Asexual reproduction limits _____ diversity.
2. Spermatogenesis produces _____ sperm cells.
3. Asexual reproduction methods include _____ ,
   fragmentation, and _____ .
4. In the haploid life cycle, gametes are produced by _____ ,
   and the zygote is produced by _____ .
5. When corresponding portions of chromatids on two homologous
   chromosomes change places, _____-_____
   has occurred.
6. Only one ovum is produced by _____ .
7. In plants that have alternation of generations, the haploid
   _____ produces the gametes.
8. Increased genetic variation often increases the rate of _____ .
9. Meiosis in plants often produces _____ , haploid cells that later lead to the production of gametes.
10. Crossing-over is an efficient way to produce _____
    _____ , which increases genetic diversity.

Questions 11–14 refer to the figure below.



A B C

11. The process shown above is called _____ .

12. In the process shown above, label *A* refers to _____ .

13. In the process shown above, label *B* refers to _____ and _____ .

14. In the process shown above, label *C* refers to _____ .

Read each question, and write your answer in the space provided.

15. Describe the similarities and differences between the formation of male and female gametes.

16. Identify and describe the three types of asexual reproduction.

17. What is the difference between anaphase I and anaphase II? Why is the difference significant?

18. Describe the haploid and diploid life cycles.

19. Describe the advantages and disadvantages of sexual reproduction.

20. How does crossing-over affect evolution?