

## Assessment

**Chapter Test****Meiosis and Sexual Reproduction**

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

- \_\_\_\_\_ 1. Which of the following is an advantage of sexual reproduction?
- The offspring are all genetically identical.
  - It increases genetic diversity.
  - It takes energy to find a mate and produce gametes.
  - Many offspring are produced in a short time.
- \_\_\_\_\_ 2. In alternation of generations, which of the following is haploid?
- spores
  - eggs
  - sperm
  - All of the above
- \_\_\_\_\_ 3. In telophase II, cytokinesis results in
- |                       |                        |
|-----------------------|------------------------|
| a. two haploid cells  | c. four haploid cells. |
| b. two diploid cells. | d. four diploid cells. |
- \_\_\_\_\_ 4. The final cells resulting from meiosis in either males or females are called
- |                  |                   |
|------------------|-------------------|
| a. gametes.      | c. spores.        |
| b. polar bodies. | d. diploid cells. |
- \_\_\_\_\_ 5. During meiosis, the chromatids remain attached at their centromeres until
- |                 |                 |
|-----------------|-----------------|
| a. metaphase I. | c. anaphase I.  |
| b. cytokinesis. | d. anaphase II. |
- \_\_\_\_\_ 6. In alternation of generations, spores are produced by the process of
- meiosis.
  - cytokinesis.
  - mitosis.
  - spermatogenesis.

**Chapter Test *continued***

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

7. Explain why crossing-over is an important source of genetic variation.

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8. Explain how independent assortment and crossing-over can produce a practically unlimited number of genetic combinations among human gametes.

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9. What is an advantage of asexual reproduction?

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10. Explain what happens during alternation of generations in plants.

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11. Compare the processes of spermatogenesis with those of oogenesis.

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**Chapter Test *continued***

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**In the space provided, write the letter of the description that best matches the term or phrase.**

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|--------------------------------------|---|
| _____ 12. sexual reproduction        | a. separation of a parent into two or more individuals of about equal size            |
| _____ 13. prophase I                 | b. produces gametes in the haploid phase of a plant's life cycle                      |
| _____ 14. fragmentation              | c. haploid cells occupy the major portion of this kind of life cycle                  |
| _____ 15. asexual reproduction       | d. a method of asexual reproduction in which the body breaks into several pieces      |
| _____ 16. anaphase I                 | e. $2n$   |
| _____ 17. binary fission             | f. produces spores in the diploid phase of a plant's life cycle                       |
| _____ 18. budding                    | g. a life cycle that regularly alternates between a haploid phase and a diploid phase |
| _____ 19. sporophyte                 | h. phase of meiosis during which crossing-over occurs                                 |
| _____ 20. cytokinesis                | i. all copies of the single parent's genes are passed to the offspring                |
| _____ 21. haploid life cycle         | j. process in which a cell's cytoplasm divides  |
| _____ 22. gametophyte                | k. new individuals split off from existing ones                                       |
| _____ 23. alternation of generations | l. homologous chromosomes move to opposite poles of the cell                          |
| _____ 24. diploid                    | m. two haploid cells join to form a diploid offspring                                 |