

Self-Test: Cell Growth and Division (CH 10)

Completion

Complete each statement.

1. Following replication of its DNA, each chromosome contains two _____, which are attached to each other by a centromere.
2. _____ is the process by which bacteria split asexually into two identical organisms.
3. In bacteria, cell division takes place in two stages. First the _____ is copied, and then the cell splits.
4. The sequence of events that occurs in a cell from one mitotic division to the next is called the _____.
5. Collectively, the time spent in $G_1 + S + G_2$ is called _____.
6. Microtubules that extend from the poles of a cell to the centromeres during cell division are called _____.
7. In mitosis, anaphase follows _____.
8. Chromosomes coil up into short rods during _____.
9. During cell division, plant cells form a new _____ in the center of the cell.
10. In eukaryotic cells, _____ takes place after the nucleus divides.
11. The stage of meiosis during which homologues line up along the equator of the cell is called _____.
12. After a new nuclear membrane forms during telophase of mitosis or meiosis, the _____ divides, resulting in two cells.
13. Control of the cell cycle occurs at three main _____.
14. Cancer occurs as a result of disorders in cell _____.

Essay

15.



Refer to the illustration above. Identify the structure in the illustration and discuss its importance during eukaryotic cell division. Write your answer in the space below.

16. Briefly describe the five stages of the cell cycle. Write your answer in the space below.
17. A great deal of research on the causes of and a possible cure for cancer focuses on mitosis. Why? Write your answer in the space below.