

Assessment

Chapter Test**Cell Growth and Division**

In the space provided, write the letter of the description that best matches each term.

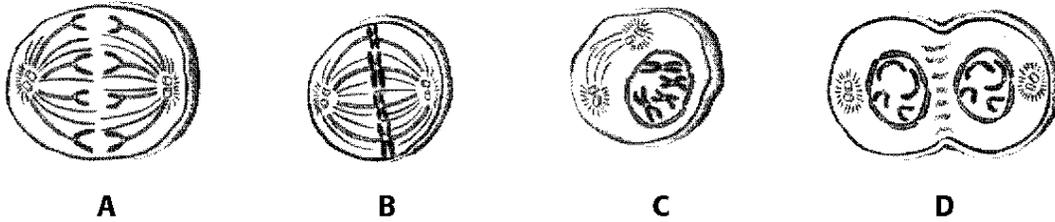
- | | |
|--|---|
| _____ 1. chromatin | a. protein molecule that aids the packing of DNA |
| _____ 2. centromere | b. preparations are made for the nucleus to divide |
| _____ 3. gene | c. a mass of rapidly dividing, abnormal cells |
| _____ 4. chromosome | d. combination of DNA and proteins in eukaryotes |
| _____ 5. histone | e. the region where sister chromatids are attached |
| _____ 6. centrosome | f. DNA is duplicated in the nucleus |
| _____ 7. cancer | g. the cell grows and carries out routine functions |
| _____ 8. synthesis (S) phase | h. group of diseases involving uncontrolled cell growth |
| _____ 9. first gap (G ₁) phase | i. segment of DNA that codes for RNA and a protein |
| _____ 10. second gap (G ₂) phase | j. organelle in eukaryotes that migrates to one of the poles during mitosis to direct chromosome movement |
| _____ 11. tumor | k. structure in which genetic material is packaged |

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

- _____ 12. Why do cells divide after they reach a certain size?
- to maintain a large surface area-to-volume ratio
 - to ensure protein-making instructions can be copied from DNA in a timely manner
 - to be able to get rid of cell wastes with ease
 - All of the above
- _____ 13. The repeating sequence of growth and division through which many eukaryotic cells pass is called
- a checkpoint.
 - the cell cycle.
 - mitosis.
 - cancer.
- _____ 14. Before cell division begins, both prokaryotes and eukaryotes need to
- copy their DNA.
 - duplicate their centrioles.
 - make extra histone proteins.
 - go through cytokinesis.

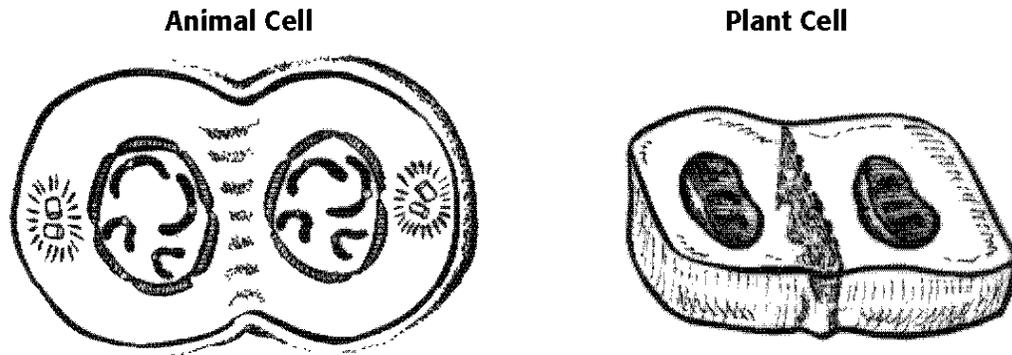
Chapter Test *continued*

Questions 30 and 31 refer to the figure below, which shows the stages of mitosis.



- _____ 30. Which of the following correctly indicates the order in which mitosis occurs?
- A, B, C, D
 - B, A, C, D
 - C, B, A, D
 - A, C, B, D
- _____ 31. Which stage shows metaphase?
- A
 - B
 - C
 - D

Questions 32–34 refer to the figures below.



- _____ 32. The phase of the cell cycle that these cells are in is
- first gap (G_1) phase.
 - synthesis (S) phase.
 - interphase.
 - cytokinesis.
- _____ 33. The structure in the center of the animal cell that pinches the cell in half is called a
- belt of protein threads.
 - cell plate.
 - centromere.
 - spindle.
- _____ 34. The structure in the center of the plant cell that causes the cell to divide into two cells is called a
- belt of protein threads.
 - cell plate.
 - centromere.
 - spindle.