socrative by MasteryConnect

Cell Cycle and Cell Specialization

Score: _____

1. **A group of different tissues working together to accomplish a common purpose is**

(A) cell
(B) organ
(C) organ system
(D) organism

2. **At the end of mitosis, each daughter cell has**

(A) the same number and kinds of chromosomes as in the parent cell.
(B) the same number but different kinds of chromosomes as in the parent cell.
(C) twice the number of chromosomes as in the parent cell.
(D) half the number of chromosomes as in the parent cell.

3. **Chromosomes are made up of**

(A) nuclear RNA
(B) DNA and protein
(C) protein
(D) DNA

4. **In mitosis, sister chromatids separate during**

(A) metaphase
(B) prophase
(C) anaphase
(D) telophase

5. **In the cell cycle, DNA replication occurs during the**

(A) S phase
(B) G1 phase
(C) G2 phase
(D) M phase

6. Beginning with mitosis (M phase), what are the other parts of the cell cycle in order in which they occur?

A) cytokinesis, G1, S, G2

B) cytokinesis, S, G1, S, G2

C) S, cytokinesis, G1, S, G2

D) S, G1, S, G2

7. What is the correct sequence of the phases of mitosis?

A) telophase, anaphase, metaphase, prophase

B) anaphase, metaphase, prophase, telophase

C) prophase, anaphase, metaphase, telophase

D) prophase, metaphase, anaphase, telophase

8. Prior to cell division, each chromosome replicates or duplicates its genetic material. The products are connected by a centromere and are called:

A) sister chromosomes

B) homologous chromosomes

C) sex chromosomes

D) sister chromatids

9. The first stage of mitosis when chromosomes start becoming visible in the microscope is called:

A) anaphase

B) prophase

C) telophase

D) metaphase

10. In which phase do the chromosomes align in the center of the cell?

A) prophase

B) metaphase

C) anaphase

D) telophase

11. What occurs during anaphase?

A) the mitotic spindle begins to form

B) the chromosomes align on a plane in the center of the cell

C) the sister chromatids separate

D) the mitotic apparatus disassembles

12. What is the part of the chromosome that joins the two chromatids?

A kinetochore

B centriole

C centromere

D mitotic spindle

13. Which stage of mitosis is seen in the pictured cell?

A prophase

B metaphase

C anaphase

D telophase

1

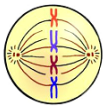
14. Which stage of mitosis is seen in the pictured cell?

A prophase

B metaphase

C anaphase

D telophase



15. The cell cycle is controlled in most cells by

A time, after a certain length of time the cell divides

B a series of checkpoints

C the completion of one phase which triggers the beginning of the next

D cell size, when the cell reaches a certain size, it divides

16. Following telophase in animal cells, a cell plate begins to form.

A True

B False

17. Which phase of mitosis is associated with formation of the nuclear envelope?

A interphase

B prophase

C metaphase

D anaphase

E telophase

18. During which phase of the cell cycle does cell growth occur?

A) interphase

B) cytokinesis

C) anaphase

D) telophase

19. Once nerve cells become mature, they don't usually undergo cell division. Based on your knowledge of the cell cycle, you would predict that mature nerve cells become arrested in the _____ of the cell cycle.

A) G0 phase

B) S phase

C) prophase

D) G1 phase

E) G2 phase

20. A duplicated chromosome has how many chromatids?

A) one

B) two

C) three

D) four

21. Cancer is a disorder in which some cells have lost the ability to control their

A) size

B) weight

C) mass

D) growth

22. Which list represents the levels of organization in a multicellular organism from the simplest level to the most complex level?

A) cell, tissue, organ system, organ

B) organ system, organ, tissue, cell

C) tissue, organ, organ system, cell

D) cell, tissue, organ, organ system