


AP Biology Fall Semester Set 1


1. During which stage does DNA replication occur?

1 pts.

- A. Prophase
- B. Metaphase
- C. Anaphase
- D. none of these
-  Flag this question for later review

2. At what phase in the cell cycle does DNA replication occur?

1 pts.

- A. G1
- B. S
- C. G2
- D. M
-  Flag this question for later review


3. Which of the following is NOT correct?

1 pts.

- A. Mitosis produces genetically identical cells.
- B. Cytokinesis is a part of mitosis
- C. Metaphase occurs before anaphase.

AP Biology Fall Semester Set 1

D. All somatic cells are produced by mitosis.

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4. What is the function of centrioles?


1 pts.

A. To cause cytokinesis via the concentric shortening of microtubules.

B. They are required for DNA replication.

C. They are the structure which hold the 2 daughter chromatids together at the centromere.

D. They produce microtubules for the chromosomes to migrate along as they move to opposite poles of the cell.

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5. Which answer gives the stages of mitosis in proper chronological order?


1 pts.

A. Anaphase, prophase, metaphase, telophase

B. Metaphase, anaphase, telophase, prophase

C. Prophase, metaphase, anaphase, telophase.

D. Interphase, prophase, metaphase, anaphase, telophase.

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AP Biology Fall Semester Set 1

6. Which is the correct sequence of stages in the cell cycle?


1 pts.

A. G1, S, G2, M

B. G1, G2, S, M

C. S, G1, G2, M

D. G1, M, G2, S

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7. In prophase, the nuclear membrane disappears.

1 pts.

A. True, it occurs early in prophase.

B. True, it occurs late in prophase.

C. False, it is not associated with prophase.

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8. Which of the following is correct?


1 pts.

A. The chromosomes shorten and thicken during prophase.

B. The nucleolus reappears following telophase.

C. Interphase is characterized by cellular activity, as the cell is preparing for the next mitotic event.


D. All of the above.

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9. The cytoplasm divides, and the cell contents are separated into two separate cells

1 pts.

- A. telophase
- B. S phase of interphase
- C. S phase of interphase
- D. cytokinesis
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10. Chromosomes become aligned along the equatorial plane of the cell

1 pts.

- A. prophase
- B. metaphase
- C. anaphase
- D. telophase
-  Flag this question for later review

11. Migration of the daughter chromosomes to the two poles is complete.

1 pts.

- A. prophase
- B. metaphase
- C. anaphase
- D. telophase
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AP Biology Fall Semester Set 1

12. In mitosis the number of chromosome sets in daughter cells


1 pts.

A. half the number in the parent cell

B. twice the number

C. one fourth the number

D. same as in parent cell

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13. Homologous chromosomes are separated during


1 pts.

A. anaphase of mitosis

B. metaphase of meiosis

C. anaphase I of meiosis

D. anaphase I of meiosis and anaphase of mitosis

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14. Longest phase in cell cycle

1 pts.

A. M phase

B. Interphase

AP Biology Fall Semester Set 1



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15. Which is the longest phase in Meiosis I

1 pts.



A. Prophase I



B. Metaphase I



C. Anaphase I



D. Telophase I



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16. During anaphase:

1 pts.



A. chromosomes separate



B. the mitotic spindle checkpoint is created



C. chromosomes are aligned at the metaphase plate



D. microtubules begin to invade the nuclear space



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17. The first phase of mitosis is called:

1 pts.



A. prophase



B. metaphase



C. anaphase



D. telophase

AP Biology Fall Semester Set 1



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18. During metaphase the centromeres of the chromosomes gather along the equatorial plane.

1 pts.



True



False



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19. Cell division is completed when which step is finished:

1 pts.



A. telophase



B. cytokinesis



C. G1



D. mitosis



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20. After telophase is completed, the process of mitosis is completed.

1 pts.



True



False



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21. A chromatid is one of two identical copies of DNA making up a chromosome.

1 pts.

True

False


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22. Mitosis is the process by which chromosomes are duplicated within cells.

1 pts.

True

False

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23. During which phase of mitosis do the chromosomes line up along the middle of the dividing cell?

1 pts.

A. prophase

B. metaphase

C. anaphase

D. telophase

AP Biology Fall Semester Set 1



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24. A protein called p53 can keep cells from dividing. To prevent cell division, this protein most likely stops
1 pts.



A. Osmosis



B. Mitosis



C. Respiration



D. Mutation



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25. The spindle fibers are produced by the
1 pts.



A. Centrioles



B. Nucleus



C. Chromosomes




D. Chromatin




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26. A nuclear envelope forms around each set of chromosomes and cytokinesis occurs, producing four
1 pts. daughter cells, each with a haploid set of chromosomes.


AP Biology Fall Semester Set 1

- A. cytokinesis
- B. anaphase I
- C. anaphase II
- D. telophase I
- E. telophase II
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27. Homologous chromosomes move towards opposite poles of a dividing cell during...
1 pts.

- A. metaphase I
- B. anaphase I
- C. anaphase II
- D. metaphase II
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28. The function of mitosis is
1 pts.

- A. growth and repair
- B. nuclear division
- C. reproduction
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29. What is the function of meiosis?

1 pts.

A. growth and repair

B. nuclear division

C. reproduction

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30. What is the purpose of mitosis?

1 pts.

A. growth and repair

B. nuclear division

C. reproduction

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31. What is the purpose of meiosis?


1 pts.

A. growth and repair

AP Biology Fall Semester Set 1

B. nuclear division

C. reproduction

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32. Meiosis II is similar to mitosis in that...


1 pts.

A. homologous chromosomes synapse

B. DNA replicates before the division

C. the daughter cells are diploid

D. sister chromatids separate during anaphase

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33. Metaphase of meiosis I and meiosis II differ in that...

1 pts.

A. chromosomes line up at the equator

B. homologues line up in meiosis I & duplicated chromosomes line up in meiosis II

C. there are the same number of chromosomes

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AP Biology Fall Semester Set 1

34. When skin cells are attached to each other ... which of the following is considered to be the weakest?
1 pts.

A. tight junction

B. gap junction

C. desmosomes


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35. When cells are attached to each other ... which type of junction would permit inter cellular communication
1 pts.

A. tight junction

B. gap junction

C. desmosomes

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36. When cells are attached to each other ... which type of junction would be considered to be the strongest?
1 pts.

A. tight junction

B. gap junction

AP Biology Fall Semester Set 1

C. desmosomes

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37. In which of the following pairs of tissues does meiosis occur?

1 pts.

A. root tips and liver cells

B. ovaries and testes

C. meristems and testes

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38. What word is used to describe the chromosome content of the new cells formed by meiosis?

1 pts.

A. Haploid

B. Polyploid

C. Diploid

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39. What is formed as a result of meiosis?

1 pts.

A. Two new haploid cells

B. Four new haploid cells

C. Four new diploid cells

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