

# Module 07 Quiz: Mitosis

Name: \_\_\_\_\_ Date: \_\_\_\_\_

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## Part A: Multiple Choice (7 points)

*Choose the best answer for each question. (1 point each)*

1. DNA is replicated during which phase of the cell cycle?
2. A) G1
3. B) S phase
4. C) G2
5. D) Mitosis
6. The correct order of mitosis phases is:
7. A) Metaphase, Prophase, Anaphase, Telophase
8. B) Prophase, Metaphase, Anaphase, Telophase
9. C) Prophase, Anaphase, Metaphase, Telophase
10. D) Telophase, Anaphase, Metaphase, Prophase
11. During which phase do chromosomes line up along the middle of the cell?
12. A) Prophase
13. B) Metaphase
14. C) Anaphase
15. D) Telophase
16. Sister chromatids are separated during:
17. A) Prophase
18. B) Metaphase

- 19. C) Anaphase
- 20. D) Telophase
- 21. Mitosis produces:
- 22. A) Four genetically different cells
- 23. B) Two genetically identical cells
- 24. C) Four genetically identical cells
- 25. D) Two genetically different cells
- 26. The purpose of cell cycle checkpoints is to:
- 27. A) Speed up cell division
- 28. B) Ensure the cell is ready to proceed
- 29. C) Increase genetic variation
- 30. D) Prevent crossing over
- 31. The division of the cytoplasm is called:
- 32. A) Mitosis
- 33. B) Cytokinesis
- 34. C) Interphase
- 35. D) Meiosis

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## Part B: Free Response (3 points)

*Answer each question in complete sentences.*

1. (1 point) Describe what happens during prophase of mitosis.

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1. (1 point) Why is mitosis important for growth and repair in multicellular organisms?

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1. (1 point) Explain how problems with cell cycle regulation can lead to cancer.

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