

Module 08 Quiz: Meiosis

Name: _____ Date: _____

Part A: Multiple Choice (7 points)

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

1. The purpose of meiosis is to produce:
 2. A) Body cells for growth
 3. B) Gametes for reproduction
 4. C) Identical cells for repair
 5. D) Stem cells
6. During meiosis, a cell with 46 chromosomes produces gametes with:
 7. A) 46 chromosomes
 8. B) 92 chromosomes
 9. C) 23 chromosomes
 10. D) 12 chromosomes
11. Crossing over occurs during:
 12. A) Prophase I
 13. B) Metaphase I
 14. C) Anaphase II
 15. D) Prophase II
16. Independent assortment refers to:
 17. A) The random distribution of homologous chromosomes
 18. B) The separation of sister chromatids

19. C) DNA replication

20. D) Crossing over

21. Meiosis results in:

22. A) 2 diploid cells

23. B) 2 haploid cells

24. C) 4 diploid cells

25. D) 4 haploid cells

26. Nondisjunction can result in:

27. A) Identical twins

28. B) Offspring with abnormal chromosome numbers

29. C) Increased crossing over

30. D) Faster cell division

31. Homologous chromosomes separate during:

32. A) Mitosis

33. B) Meiosis I

34. C) Meiosis II

35. D) Cytokinesis

Part B: Free Response (3 points)

Answer each question in complete sentences.

1. (1 point) Compare and contrast mitosis and meiosis in terms of their purpose and the number/type of cells produced.
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1. (1 point) Explain how crossing over and independent assortment contribute to genetic variation.

1. (1 point) What is nondisjunction? Describe one condition that can result from it.
