

Anatomy and Physiology Cell Cycle and Cancer Study Guide

Use this guide to direct your attention toward the information to be covered by the test.

1. Which phase of mitosis has the chromosomes being pulled apart toward opposite ends?
2. Which stage of cell division involves the forming of two new daughter cells?
3. The basic unit of structure and function in the human body is the:
a. cell b. organ c. atom d. tissue e. system
4. Mitosis occurs after what stage of the cell cycle? How many phases does it have?
5. List in order the phases of mitosis and tell the main events that occur in each phase.
6. What is the centriole and the spindle and what is their role in cellular reproduction?
7. Draw a diagram for:
 - a. Prophase
 - b. Metaphase
 - c. Anaphase
 - d. Telophase
8. What is the smallest living unit?
9. When a cell becomes specialized this is called?
10. What is a daughter cell?
11. What is the purpose of the cell cycle?
12. What are the 3 stages of the cell cycle?
13. What are the 3 phases of interphase and what occurs in each? Draw a picture of interphase.
14. The period of cell growth and duplication of cell parts is called _____.
15. The period between divisions is what phase?
16. What stage is when the nucleus divides?
17. What stage is when the cytoplasm divides?
18. What is a chromatid?
19. What is a centromere?
20. What are stem cells?
21. The process that ensures duplication of DNA molecules during cell reproduction is _____.
22. Match these events in cell reproduction with the correct description:
 - a. Prophase
 - b. Metaphase
 - c. Anaphase
 - d. Telophase
 - _____ i. Microtubules shorten and pull chromosomes toward centrioles
 - _____ ii. Chromatin forms chromosomes; nuclear membrane and nucleolus disappear
 - _____ iii. Chromosomes elongate, and nuclear membranes form around each chromosome set
 - _____ iv. Chromosomes become arranged midway between centrioles; duplicate parts of chromosomes become separated
23. What is a tumor? Explain what causes it to form.
24. What causes cancer?
25. During what time do cancer cells grow uncontrollably?
26. When a part of a tissue is taken to be tested this is called what?
27. What are some treatments for cancer?
28. What is the difference between benign and malignant tumors?
29. What is metastasis?
30. What is remission?
31. A specialist of cancer is called an _____.