Name:

Chapter 10 Unit Exam

**Multiple Choice:** Choose the correct answer from the choices provided. **BE SURE TO MARK THE CORRECT LETTER ON YOUR SCANTRON!!!**

1. In which phase do spindle fibers first appear?
2. Metaphase
3. Anaphase
4. Telophase
5. Prophase
6. The correct order of the cell cycle is….
7. S-phase, G1-phase, G2-phase, M-phase
8. G1-phase, G2-phase, S-phase, M-phase
9. M-phase, G1-phase, S-phase, G2-phase
10. G1-phase, S-phase, G2-phase, M-phase
11. Calculate the surface area to volume ratio from the following, surface area measurements 3x3x6, volume measurements 3x3x3.
12. 54:27
13. 3:4
14. 1:1
15. 2:1
16. Daughter cells result after which of the following occurs…
17. Cells fuse together to make one large cell
18. One large cell splits apart into two separate cells which are genetically the same
19. One large cell splits apart into two separate cells that are not similar
20. All cells start off as daughter cells
21. Before cell division can take place what essential step happens first?
22. Replication of DNA
23. Chromosomes split apart
24. Nucleus is visible
25. Cytokinesis occurs
26. If the volume of the cell increases more than the surface area this will cause the SA:Volume to…
27. Increase
28. Decrease
29. Stay the same
30. This ratio has no affect on the cell
31. The most time is spent in which stage (think back to the onion root tip lab)…
32. Telophase
33. Metaphase
34. Prophase
35. Anaphase
36. G1-phase and G2-phase are when cells go through…
37. Mitosis
38. Cytokinesis
39. Extensive growth
40. Chromosome duplication
41. Cancer cells arise from….
42. Regulated cell growth
43. Uncontrolled cell growth
44. Mediation
45. Proteins
46. The following happen(s) during S-phase….
47. Chromosome replication
48. Synthesis of DNA
49. Separation of cells
50. Both a and b
51. During mitosis chromosomes split apart into…
52. Chromes
53. Chromatids
54. Molecules
55. DNA

**Matching:** Match the appropriate word with its definition. Each word will only be used one time

1. Phase that starts mitosis A. Metaphase
2. Two tiny structures located in the B. Telophase

cytoplasm near the nuclear envelope

1. Made up of DNA C. Surface Area:Volume
2. Division of the cytoplasm D. Anaphase
3. Phase that follows prophase E. Prophase
4. Inverse Relationship AB. Chromosomes
5. Last phase of mitosis AC. Cytokinesis
6. Middle phase AD. Centrioles

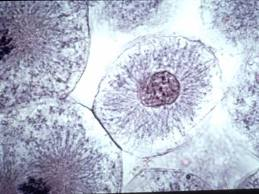
**Short Answer:** Read the following short answer prompts completely before answering the questions. To receive full credit all parts of the question must be addressed in your answer!

1. In class we discussed two limitations that are experienced during cell growth. What are these two limitations? How does the cell make adjustments to the limitations? Be sure to include at least 3 supporting facts to explain these limitations.
2. A. How do cyclins regulate cell growth?

B. Compare cancer cells to normal cells (use question 1 as a guide).

C. Name three interesting facts we discussed about cancer in class

1. The following pictures represent the four phases of mitosis. Correctly label each phase and give two supporting facts as to why you labeled it as so.

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