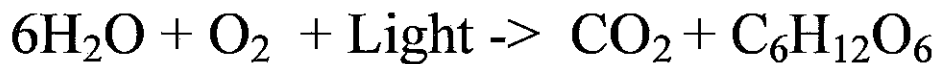


Cell Processes Study Guide**True/False***Indicate whether the statement is true or false.*

- ___ 1. Concentration measures the amount of stuff that is dissolved into a substance.
- ___ 2. Passive transport uses ATP to bring materials into the cell.
- ___ 3. When water moves from high to low, we call it osmosis.
- ___ 4. All of the energy on the earth comes from the sun.
- ___ 5. This is the correct equation for photosynthesis:



- ___ 6. This the correct equation for Cellular Respiration:

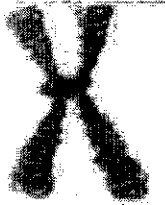
**Multiple Choice***Identify the choice that best completes the statement or answers the question.*

- ___ 7. Which of the following is an example of an autotroph?
- | | |
|-----------|-----------------|
| a. Fox | d. Glucose |
| b. Rabbit | e. Chloroplasts |
| c. Fern | |
- ___ 8. What sugar do plants make during photosynthesis
- | | |
|--|--|
| a. $\text{C}_6\text{H}_{14}\text{O}_6$ | d. $6\text{C}_{12}\text{H}_6\text{O}$ |
| b. $\text{C}_3\text{H}_6\text{O}_3$ | e. $\text{C}_6\text{H}_{12}\text{O}_6$ |
| c. $6\text{C}_{12}\text{H}_6\text{O}$ | |
- ___ 9. What pigment is used by plants to catch light from the sun?
- | | |
|----------------|----------------|
| a. Melanin | d. Chloroplast |
| b. Chlorophyll | e. Green |
| c. Cyan | |
- ___ 10. Which particle carries energy from the sun?
- | | |
|--------------|------------|
| a. Protons | d. Photons |
| b. Neutrons | e. Phasons |
| c. Electrons | |

- _____ 11. What molecules do plants pull in during Photosynthesis?
- a. Glucose
 - b. Carbon Dioxide
 - c. Water
 - d. A and B
 - e. B and C
- _____ 12. What molecules are made during Photosynthesis?
- a. Glucose
 - b. Carbon Dioxide
 - c. Water
 - d. A and B
 - e. B and C
- _____ 13. What gas is produced by plants during photosynthesis?
- a. Nitrogen
 - b. Oxygen
 - c. Neon
 - d. A and B
 - e. B and C
- _____ 14. Cellular respiration happens in 2 parts. Whic part occurs in the cytoplasm of the cell?
- a. Glycolysis
 - b. Respiration
 - c. Glucose
 - d. Oxygen
 - e. ATP Synthase
- _____ 15. Where does the cell take glucose apart to make Carbon Dioxide?
- a. Cytoplasm
 - b. Glycolysis
 - c. Mitochondria
 - d. Active Transport
 - e. Endoplasmic Reticulum
- _____ 16. How many molecules of ATP does the cell make during Glycolysis and Respiration?
- a. 2
 - b. 16
 - c. 34
 - d. 36
 - e. 38
- _____ 17. Which molecule does the cell use as a 'rechargeable battery' to power the cell processes?
- a. ADP
 - b. ATP
 - c. DNA
 - d. RNA
 - e. TAP
- _____ 18. Which of the following places the phases of Mitosis in the correct order?
- a. Metaphase, Anaphase, Phophase, Telophase
 - b. Prophase, Anaphase, Metaphase, Telophase
 - c. Prophase, Metaphase, Anaphase, Telophase
 - d. Telophase, Anaphase, Metaphase, Prophase
 - e. Prophase, Anaphase, Telophase, Metphase
- _____ 19. A single piece of DNA that is packaged to be moved around in the cell is called:
- a. Centromere
 - b. Chromosome
 - c. Chromatin
 - d. Chromosphere
 - e. Chromagraph

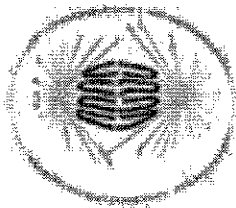
- ____ 20. When does the cell copy its DNA to be ready for cell division?
- a. G-1
 - b. Metaphase
 - c. Cytokinesis
 - d. Interphase
 - e. S-Phase

- ____ 21. What term best describes this structure in the cell?



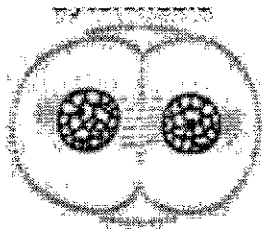
- a. Chromatid
- b. Sister Chromatid
- c. Chromosome
- d. Chromatin
- e. Daughter Cell

- ____ 22. This cell is most likely in which phase of the cell cycle?



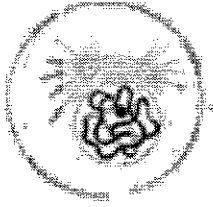
- a. Interphase
- b. Telophase
- c. Prophase
- d. Anaphase
- e. Metaphase

- ____ 23. This cell is most likely in which phase of the cell cycle?



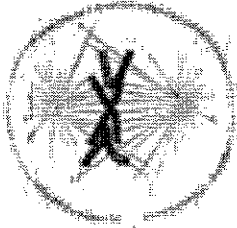
- a. Prophase
- b. Telophase
- c. Interphase
- d. Anaphase
- e. Metaphase

____ 24. This cell is most likely in which phase of the cell cycle?



- | | |
|--------------|---------------|
| a. Prophase | d. Interphase |
| b. Metaphase | e. Telophase |
| c. Anaphase | |

____ 25. This cell is most likely in which phase of the cell cycle?



- | | |
|---------------|--------------|
| a. Interphase | d. Anaphase |
| b. Metaphase | e. Metaphase |
| c. Telophase | |

____ 26. In which phase does the cell begin to condense the chromatin into chromosomes?

- | | |
|---------------|--------------|
| a. Interphase | d. Telophase |
| b. Prophase | e. Metaphase |
| c. Anaphase | |

____ 27. In which phase does the cell move the chromosomes to opposite sides of the cell?

- | | |
|--------------|---------------|
| a. Metaphase | d. Anaphase |
| b. Telophase | e. Interphase |
| c. Prophase | |

____ 28. When does the cell split into two different daughter cells?

- | | |
|----------------|---------------|
| a. Cytokinesis | d. Interphase |
| b. Telophase | e. S-Phase |
| c. Anaphase | |

____ 29. In which phase does the cell line up the sister chromatids in the middle of the cell?

- | | |
|---------------|----------------|
| a. Anaphase | d. Cytokinesis |
| b. Interphase | e. Telophase |
| c. Metaphase | |

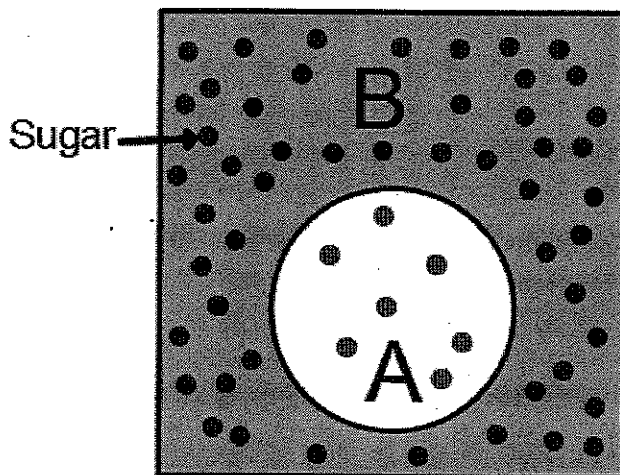
- _____ 30. During S-Phase, the cell makes:
- a. More Organelles
 - b. More Cytoplasm
 - c. Daughter Cells
 - d. More ATP
 - e. Sister Chromatids
- _____ 31. During Diffusion, molecules move:
- a. From high to low
 - b. With energy
 - c. Without energy
 - d. A and B
 - e. A and C
- _____ 32. What is the main difference between autotrophs and heterotrophs?
- a. The number of organelles in their cells
 - b. The way they get their food
 - c. The amount of DNA in the nucleus
 - d. How much ATP they can make
 - e. How much they can move around
- _____ 33. A Hypertonic solution has
- a. Only a small amount of stuff dissolved
 - b. An equal amount of stuff dissolved
 - c. A lot of stuff dissolved
 - d. A and B
 - e. B and C
- _____ 34. Which of the following is the correct abbreviation for "The Concentration of Sugar"
- a. (Sugar)
 - b. (S)
 - c. {Sugar}
 - d. {S}
 - e. [Sugar]
- _____ 35. Which part of an atom make up the nucleus?
- a. Electrons
 - b. Protons
 - c. Neutrons
 - d. A and C
 - e. B and C
- _____ 36. How many atoms of Hydrogen are in a molecule of water, H₂O
- a. 1
 - b. 2
 - c. 3
 - d. 4
 - e. Hydrogen is not part of water
- _____ 37. How do organisms grow?
- a. Their cells increase in size
 - b. Their cells divide to make more cells
 - c. Their cells decrease in size
 - d. A and C
 - e. B and C
- _____ 38. How are photosynthesis and respiration related?
- a. Respiration only happens in animals
 - b. They both recharge ATP
 - c. They both make oxygen
 - d. They are opposite reactions
 - e. None of the above

Matching

- | | |
|-------------------|----------------------|
| a. Diffusion | f. Passive Transport |
| b. Respiration | g. Stomata |
| c. ATP | h. Osmosis |
| d. Cell division | i. Xylem |
| e. Photosynthesis | j. Active Transport |

- ___ 39. When a cell splits into 2 daughter cells
- ___ 40. Moving items into or out of the cell without using ATP
- ___ 41. The movement of water from areas of high concentration to areas of low concentration
- ___ 42. A rechargeable battery for the cell
- ___ 43. The movement of stuff from areas of high concentration to areas of low concentration
- ___ 44. Putting water and carbon dioxide together to make glucose
- ___ 45. Moving items into or out of a cell without using ATP
- ___ 46. Breaking down sugar to make energy and carbon dioxide

Use the following diagram to match the term to the area of the diagram.



- | | |
|----------------|----------------|
| a. Area A | e. No movement |
| b. Area B | f. Diffusion |
| c. From A to B | g. Osmosis |
| d. From B to A | |
- ___ 47. Where is there a low concentration of sugar?
- ___ 48. Where is there a high concentration of sugar?
- ___ 49. Which direction would the sugar move?
- ___ 50. What process is going to make the sugar move?