

Name _____

Date _____

Semester Assessment

Select the answer that best completes the question.

1. Movement of molecules from an area of higher concentration to one of lower concentration is called _____.
 - A. osmosis
 - B. mitosis
 - C. diffusion
 - D. active transport
2. Movement of molecules from an area of lower concentration to one of higher concentration with energy is called _____.
 - A. osmosis
 - B. mitosis
 - C. diffusion
 - D. active transport
3. Movement of water across a membrane is called _____.
 - A. osmosis
 - B. mitosis
 - C. diffusion
 - D. active transport
4. Plant cells change the sun's energy to chemical energy during _____.
 - A. meiosis
 - B. mitosis
 - C. photosynthesis
 - D. active transport
5. One way to speed up a chemical reaction is to add a _____, which is unaffected by the reaction.
 - A. catalyst
 - B. surface area
 - C. concentration
 - D. heat

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6. Increasing the _____ of a reactant exposes more of it to the reaction taking place.
- A. catalyst
 - B. surface area
 - C. concentration
 - D. heat
7. What is the circulatory system's function?
- A. It removes cellular waste from the blood and converts it to urine.
 - B. It exchanges carbon dioxide and oxygen in the lungs.
 - C. It transports oxygen and nutrients to cells while removing carbon dioxide and other wastes.
 - D. It breaks down food into usable nutrients.

Circle the organisms that belong to the kingdom specified. You may circle more than one item in the list.

8. Kingdom Archaeobacteria
- A. halophile bacteria
 - B. virus
 - C. sea star
 - D. worm
9. Kingdom Eubacteria
- A. thermophile bacteria
 - B. paramecium
 - C. cyanobacteria
 - D. algae
10. Kingdom Protista
- A. amoeba
 - B. sea anemone
 - C. beetle
 - D. seaweed

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11. Kingdom Fungi
 - A. pine tree
 - B. mushroom
 - C. moss
 - D. mold

12. Kingdom Planta
 - A. moss
 - B. lichens
 - C. fern
 - D. virus

13. Kingdom Animalia
 - A. frog
 - B. mushroom
 - C. worm
 - D. thermophile bacteria

True or False: Write True or False on the line next to the statement.

14. _____ Chemicals packed together tightly react more slowly.

15. _____ Chemical reactions usually take place more quickly at high temperatures.

16. Match each cell part to its function.

- | | |
|---------------|--|
| cytoplasm | A. in plant cells, converts energy from the sun into glucose |
| nucleus | B. contains all of the genetic information in a cell |
| cell membrane | C. directs all of the cell activities |
| chloroplasts | D. holds all of the cell organelles |
| chromosome | E. fluid-filled bubble responsible for getting rid of waste |
| | F. controls what goes in and out of the cell |

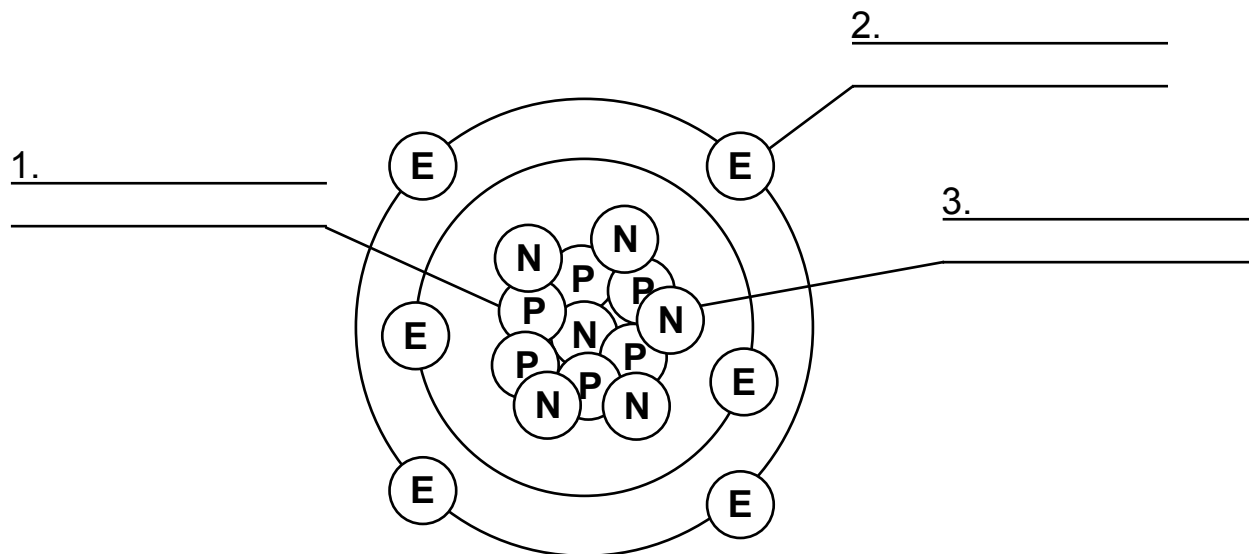
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Fill in the blank with the word or words that best completes the sentence.

Word Bank

protons	electrons	genes	neutrons
pH scale	periodic table	siblings	interphase

17. The nucleus of an atom is made of _____ and _____.
18. The _____ is used to indicate whether a solution is acidic or basic.
19. Traits passed down from parent to offspring are determined by _____.
20. The nucleus of an atom is surrounded by _____.
21. Label the three main parts of an atom. Then describe their charges.



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Identify the elements and the number of atoms of each in the chemical formulas.

22. $C_{12}H_{22}O_{11}$ _____

23. $PbSO_4$ _____

Write the compound for the formula described.

24. 1 atom of cobalt _____
2 atoms of chlorine _____

25. 2 atoms of aluminum _____
3 atoms of sulfur _____

26. Name two ways the properties of iron and oxygen are different from the compound iron oxide (rust). _____

27. An atom of platinum, Pt, has 78 protons. How many electrons does it contain? _____

28. Read the list of items and their pH. Classify them according to whether they are an acid, base, or are neutral.

Soap: 11 _____

Lemon juice: 2.3 _____

Ammonia: 11.5 _____

Tomatoes: 4.2 _____

Stomach acid: 1.4 _____

Pure water: 7.0 _____

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29. Life is organized into six kingdoms. Circle the words below that are used to name the six kingdoms.

- A. Archaeobacteria
- B. Species
- C. Vertebrate
- D. Vascular Plants
- E. Fungi

30. Life is organized into six kingdoms. Circle the words below that are used to name the six kingdoms.

- A. Eubacteria
- B. Planta
- C. Protista
- D. Animalia
- E. Invertebrate
- F. Non-vascular plants

31. Circle the words below that name major levels of classification.

- A. family
- B. kingdom
- C. gender
- D. class
- E. phenotype

32. Circle the words below that name major levels of classification.

- A. phylum
- B. species
- C. order
- D. genus
- E. group

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33. Explain how blood flows through the human heart. Be sure to include the words lungs, atrium, and blood in your answer.

34. Describe how the respiratory system exchanges carbon dioxide and oxygen in the lungs. Please include the words carbon dioxide, lungs, trachea, and bronchi in your answer.

35. Put the steps below in order to explain how the excretory system functions.

- _____ Urine flows through ureter tubes and is stored in the bladder.
- _____ Waste and water from the blood are filtered in the kidneys and converted to urine.
- _____ The blood transports urea, old cells, excess salt, and unwanted water to the kidneys.
- _____ When the bladder becomes full, urine exits the body through the urethra.