

## Atoms, Elements and the Periodic Table **Answers**

### Multiple Choice

*Identify the letter of the choice that best completes the statement or answers the question.*

- Water** 1. Which substance listed below is NOT an element?
- atom** 2. A(n) \_\_\_\_\_ is a basic unit on matter.
- Neutrons** 3. \_\_\_\_\_ are particles without electric charge in the atom's nucleus.
- Bohr** 4. Which scientist calculated what energy levels were around each element? We also use his model to draw the elements.
- ion** 5. A positively charge \_ has more prrotons than electrons.
- matter** 6. Anything that takes up space and has mass is \_\_\_\_\_.
- # of Neutrons** 7. Isotopes of Carbon have different \_\_\_\_\_.
- protons & neutrons** 8. \_\_\_\_\_ are particles that are located in the atom's nucleus.
- Periods** 9. The horizontal rows in the Periodic Table are called the \_\_\_\_.
- Groups & Families** 10. The vertical columns of the Periodic Table are called the \_\_\_\_.
- Protons** 11. The atomic number refers to the number of \_\_\_\_\_.
- Protons & Neutrons** 12. The atomic mass is a combination of what two sub-atomic particles?
- valence Electrons** 13. The number of electrons on the outer energy level or shell is called \_\_\_\_.
- 7** 14. Halogens all have \_\_\_\_ valence electrons.
- Electrons** 15. H<sub>2</sub>O is a compound formed by sharing \_\_\_\_.
- atomic #** 16. The modern periodic table is arranged in order of increasing \_\_\_\_.
- Group** 17. Elements with similar characteristics are the same \_\_\_\_.
- Energy levels** 18. The horizontal rows on the periodic table tells us how many \_\_\_\_\_ the element has.

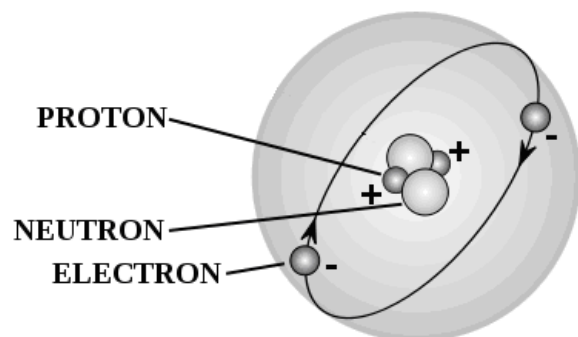
- atoms 19. Elements are all alike in that they all contain \_\_\_\_.
- Like characteristics & = valence electrons 20. A family or group of elements have \_\_\_\_.
- Electrons 21. An ion has lost or gained \_\_\_\_.
- Neutrons 22. An isotope has lost or gained \_\_\_\_.
- Alkali Metals 23. Silvery solids with low densities and low melting points found in Group 1.
- Alkaline Earth Metals 24. Another name for Group 2.
- Transition Metals 25. Elements in group 3-12.
- Noble Gases 26. Groups that has its valence electrons filled.
- Halogens 27. Groups that readily combine with Alkali Metals to form salts.
- metal 28. A transition element
- non- metal 29. Noble Gases
- non- metal 30. Calcium
- metalloids 31. Elements that show properties of both metals and non-metals.
- metalloids 32. Boron & Silicon
- 2 electrons 33. 1<sup>st</sup> energy level
- 8 electrons 34. 2<sup>nd</sup> energy level
- 18 electrons 35. The 3<sup>rd</sup> energy level
- 32 electrons 36. 4<sup>th</sup> energy level
- Bohr 37. Electrons travel definite paths
- Rutherford 38. Gold Foil experiment
- Thomson 39. Cathode Ray Tube
- Democritus 40. Proposed Atoms
- Dalton 41. Discovered the nucleus of the atom

Thomson

42. Plum pudding model

Dalton

43. Created the Atomic Theory



\_\_\_\_ 44. Neutrons

\_\_\_\_ 45. Protons

\_\_\_\_ 46. Electrons

47. Fill in the missing information. Round all answers

Protons = 79

Electrons = 79

Neutrons = 118

Atomic Mass = 197

Atomic Number = 79

79
<b>Au</b>
Gold
196.967

48. Fill in the missing information. Round all answers

Protons = 1

Electrons = 1

Neutrons = 0

Atomic Mass = 1

Atomic Number = 1

1
<b>H</b>
Hydrogen
1.008

49. Draw a Bohr model and a Lewis Dot diagram for the element on the board.

1<sup>st</sup> period Nitrogen

5<sup>th</sup> period Aluminum

