

Name: _____

Date: _____

Quiz name: Physical Science, CH 04 & 05 Atomic Structure & Periodic Table of Elements

1. The subatomic particle with a negative charge is the :

2. The Scientist that discovered the electron is Ernest Rutherford.

- (A) True
 (B) False

3. The subatomic particle that makes the atom unique is the:

4. The elements found in group 1 are called the:



A standard periodic table of elements showing groups and periods. The lanthanide and actinide series are shown below the main table.

5. When an electron falls back to it's original energy level it will emit different colors of:

6. The Scientist or Philosopher who coined the term "atom" was:

- (A) Schrodinger
 (B) Bohr
 (C) JJ Thomson
 (D) Democritus

7. The scientist or philosopher that was responsible for discovering the nucleus and the positive particle inside the nucleus is Ernest Rutherford.

- (A) True
 (B) False

8. Name the metallic element in group one that would be the most reactive:

9. The isotopes Boron-10 and Boron-11 will have the same number of neutrons but a different number of protons.

- (A) True
- (B) False

10. The scientist who was responsible for the gold foil experiment was:(last name only please)

11. The atomic number represents the number of _____ in an atom's nucleus.

12. The subatomic particles that have the most mass are the protons and the neutrons.

- (A) True
- (B) False

13. Energy level four in the electron cloud will hold a total of _____ electrons.

14. All orbitals in the electron cloud can hold a maximum of _____ electrons.

15. The sublevels found on energy level two are s,p,d,and f.

- (A) True
- (B) False

16. What scientist was responsible for the planetary model of the atom ? (last name only please)

17. The unit used to label average atomic mass is:

- A grams
- B kilograms
- C atomic nucleus units
- D atomic mass units

18. What type of elements on the periodic table have several elements that are gases at room temperature?

A standard periodic table of elements. The groups are labeled with letters B, C, N, O, F, Ne at the top right. The periods are labeled with numbers 1 through 7 on the left. The table includes the lanthanide and actinide series at the bottom, labeled with their respective series names.

19. Name the energy level in the electron cloud that can hold a total of 18 electrons.

20. All of the following are non-metals EXCEPT:

- A Hydrogen
- B Argon
- C Silicon
- D Iodine

A standard periodic table of elements. The groups are labeled with letters B, C, N, O, F, Ne at the top right. The periods are labeled with numbers 1 through 7 on the left. The table includes the lanthanide and actinide series at the bottom, labeled with their respective series names.

21. All of the following are chemical and physical properties of metals EXCEPT:

- A poor conductors
- B malleable
- C gives away electrons
- D ductile

22. Democritus thought matter was composed of tiny particles called atoms, and these atoms were: _____.

23. In the lab titled: Modeling the Location of and Electron; each shaded in square represented one electron in the electron cloud.

- A True
- B False

24. The group of elements on the periodic table that already have a full outer energy level are the _____.

Periodic table of elements showing atomic numbers, symbols, and names. Includes Lanthanide and Actinide series.

25. The _____, is the sum of the protons and neutrons in the nucleus of an atom.

26. The electrons found in the last energy level are call the _____ electrons.

27. All of the following are true of Dalton's Atomic Theory, EXCEPT:

- A atoms of the same element are identical
- B all matter is composed of atoms that are indivisible
- C atoms of different kinds combine to make compounds
- D in a chemical reaction, the atoms are simply rearranged

28. In the electron cloud, there are a total of _____ energy levels.

29. NAME the element found in group 14 and period 5.

Periodic table of elements showing atomic numbers, symbols, and names. Includes Lanthanide and Actinide series.

30. Calculate the number of neutrons in the isotope Lead-207.

Periodic table of elements showing atomic numbers, symbols, and names. Includes Lanthanide and Actinide series.

31. How many protons are found in an atom of Manganese?

A standard periodic table of elements with atomic numbers and symbols. The lanthanide and actinide series are shown as separate rows below the main table.

32. How many electrons are found in an atom of Zirconium?

A standard periodic table of elements with atomic numbers and symbols. The lanthanide and actinide series are shown as separate rows below the main table.

33. What is the average atomic mass of an Aluminum atom?

A standard periodic table of elements with atomic numbers and symbols. The lanthanide and actinide series are shown as separate rows below the main table.

34. What is the mass number for a Gold atom?

A standard periodic table of elements with atomic numbers and symbols. The lanthanide and actinide series are shown as separate rows below the main table.

35. Mendeleev arranged his periodic table of elements using the _____ of the elements and their properties.

36. Name the element that has five valence electrons and those valence electrons are found on energy level six.

A standard periodic table of elements with atomic numbers and symbols. The lanthanide and actinide series are shown as separate rows below the main table.

37. All of the following are metalloids EXCEPT:

- (A) Phosphorous
- (B) Boron
- (C) Antimony
- (D) Tellurium

A standard periodic table of elements showing all elements from Hydrogen (H) to Oganesson (Og). The lanthanide and actinide series are shown as separate rows below the main table.

38. The subatomic particle found outside the nucleus of the atom is the:

39. All Alkaline Earth metals have a total of _____ valence electrons.

A standard periodic table of elements showing all elements from Hydrogen (H) to Oganesson (Og). The lanthanide and actinide series are shown as separate rows below the main table.

40. NAME the element has the following electron configuration: $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^5$

A standard periodic table of elements showing all elements from Hydrogen (H) to Oganesson (Og). The lanthanide and actinide series are shown as separate rows below the main table.

41. All of the following elements(Chlorine, Bromine, Iodine) have _____ valence electrons.

- (A) 6
- (B) 7
- (C) 8
- (D) 9

42. The elements found between group 3-12 are called the _____.

43. How many neutrons does an isotope of Barium-137 have?

44. Name the element with the following electron configuration: $1s^2 2s^2 2p^6 3s^1$

45. Name the family that the following elements belong to: Bromine, Fluorine, Iodine, Chlorine

- (A) Alkaline Earth Metals
- (B) transition metals
- (C) Halogens
- (D) Noble Gases