Name _____ Chemistry ___/___/___

Chapter 2 Vocabulary Matching - Write the letter of the definition in front of its term.

1. _____ amplitude
2. _____anode
3. _____atomic mass unit
4. _____atomic number
5. _____atomic weight
6. _____Aufbau Principle
7. _____cathode
8. _____cathode ray
9. _____electrode
10. _____electromagnetic spectrum
11. _____electron
12. _____electron configuration
13. _____energy level
14. _____excited state
15. _____frequency
16. _____gold foil experiment
17. _____ground state
18. _____Heisenberg's uncertainty principle
19. _____Hund's rule

a. a quantum of light; a discrete bundle of electromagnetic energy that behaves as a particle

b. a negative electrode through which current flows

c. a positively charged subatomic particle located in the nucleus of an atom

d. the modern description of the behavior of electrons in atoms

e. an electrically neutral subatomic particle located in the nucleus of an atom

f. negatively charged subatomic particle located around the nucleus in a diffuse electron cloud

g. the total mass of materials present after a chemical reaction is the same as the total mass before the reaction

h. the central region of an atom made up of protons and neutrons

i. J.J. Thomson's atomic model named for an English dessert

j. the theory that uses complex mathematical equations to describe wave properties of electrons

k. a region of an atom where there is a high probability of finding an electron

l. atoms of the same element with different numbers of neutrons

m. electrons enter orbitals of lowest energy first

n. the most stable arrangement of the electrons is with the maximum number of unpaired electrons, all with the same spin direction

o. total range of electromagnetic radiation ranging from the longest radio waves to the shortest gamma waves

p. a specific energy or group of energies that can be possessed by an electron in an atom

q. the height of a wave from origin to the crest

r. the number of protons in the nucleus of an atom

s. the arrangement of electrons around the nucleus of an atom in its ground state

20. _____isotope

21. _____Law of Conservation of Matter

22. _____Law of Definite Composition

23. _____Law of Multiple Proportions

24. _____mass number

25. _____neutron

26. _____nucleus

27. _____orbital

28. _____Pauli exclusion principle

29. _____photoelectric effect

30. _____photon

31. _____plum pudding model

32. _____proton

33. _____quantum

34. _____quantum mechanics model

35. _____quantum theory

36. _____subshell

37. _____wavelength

t. the distance between two adjacent crests of a wave

u. an experiment performed by Rutherford where alpha particles were shot at a thin piece of gold foil

v. the number of wave cycles that pass a given point in a certain unit of time

w. the amount of energy need to move an electron from its ground state to an excited state

x. no more than two electrons can occupy an atomic orbital, each electron must have an opposite spin

y. a positive electrode through which current flows

z. one or more orbitals with the same set of principal quantum and azimuthal quantum values

aa. the weighted average mass of the atoms in a naturally occurring element

bb. the lowest energy level occupied by an electron when an atom is in its most stable energy state

cc. a higher than normal energy level occupied by an electron in an atom

dd. when two elements form more than one compound, the different masses of one element that combine with the same mass of the other element are in the ratio of small whole numbers

ee. the total number of protons and neutrons in the nucleus of an atom

ff. it is impossible to know the velocity and location of a particle at the same time

gg. one twelfth the mass of a carbon12 isotope

hh. a conductor in a circuit that carries electrons to or from a substance other than a metal

ii. a compound contains the same elements in exactly the same proportions by mass regardless of the size or source of the compound

jj. a beam of electrons produced at the cathode of a tube containing a gas at a low pressure

kk. a process in which electrons are ejected by certain metals when light of sufficient energy is shined on them