Unit 4 Handout 1 **Atomic History and Atomic Model Review**

Use your notes and textbook to answer the following questions

A Thomson	F Dalton .
B Rutherford	G Democritus
C Chadwick	H Schrodinger
D Einstein	I Planck
E Bohr	J Born/Heisenberg

_____ Said electrons are located in certain areas called energy levels.

_____ Proposed the first atomic model that atoms are indivisible hard spheres

_____ Came up with a complicated formula that shows the probability of where e- are

_____ Said light is absorbed in packages called photons (quanta).

_____ Found atoms have a lot of empty space.

_____ Came up with orbitals by treating electrons as energy waves.

_____ Came up with a formula that changes matter into energy ($E = mc^2$)

_____ Used polonium and gold foil to study the atom

_____ Studied the problem of how atoms radiation is related to its temperature

_____ Believed matter was made up of particles that "could not be cut"

_____ Proposed electrons can "quantum leap" when given the exact amount of energy

_____ Discovered neutrons

_____ Discovered protons

_____ Discovered the electron

_____ Brought back the idea atoms are spheres

_____ Came up with orbitals by treating electrons as a particle.

_____ First person to use the word atoms.

_____ Said electrons do quantum leaps between energy levels.

_____ Said the atom was a positive dough with negative electrons scattered throughout

_____ Said all matter absorb or give off light energy in packages called photons.

_____ Proposed atoms have a dense positive center called the nucleus