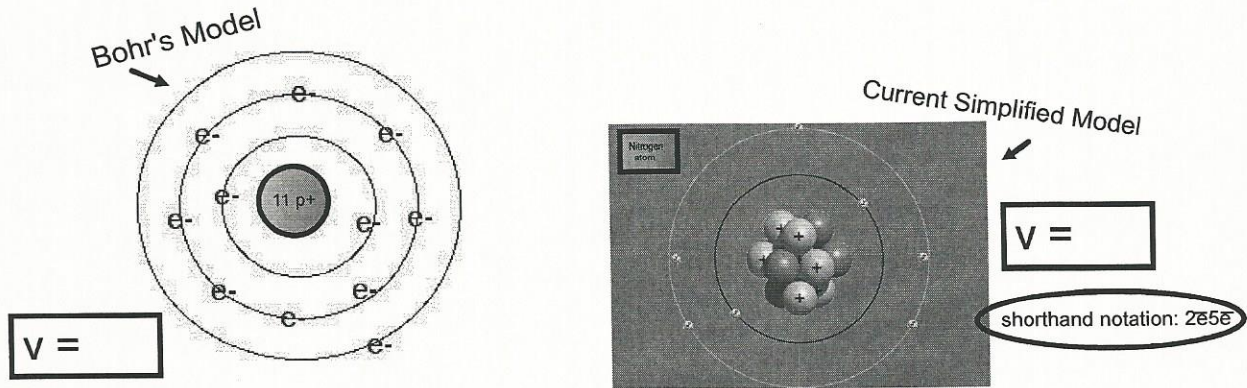


Physical Science 436 Quiz #2

Name:

Date:



1. For many years a variety of scientists made contributions towards developing our understanding of what an atom looks like.

a) What was Chadwick's contribution? That is, what did he add to Bohr's model in order that we would be left with the current simplified atomic model?

b) Identify three features of Bohr's model that remain in the simplified atomic model.

c) The atom depicted in the "Bohr's Model" above is an atom of which element? _____

d) How many valence electrons are there in each of the two atoms shown above?
Fill in the rectangles above with your answers.

e) Write the shorthand notation for the electron configuration of the atom shown in the "Bohr's Model". _____

2. Refer to the periodic table and fill in the following charts:

Information on Sulphur

Symbol: _____

Atomic number: _____

Atomic mass: _____

Number of protons: _____

Number of electrons: _____

Number of neutrons: _____

Group number: _____

Period number: _____

Number of energy levels: _____

Number of electrons in the outermost energy levels: _____

Information on Potassium

Symbol: _____

Atomic number: _____

Atomic mass: _____

Number of protons: _____

Number of electrons: _____

Number of neutrons: _____

Group number: _____

Period number: _____

Number of energy levels: _____

Number of electrons in the outermost energy levels: _____

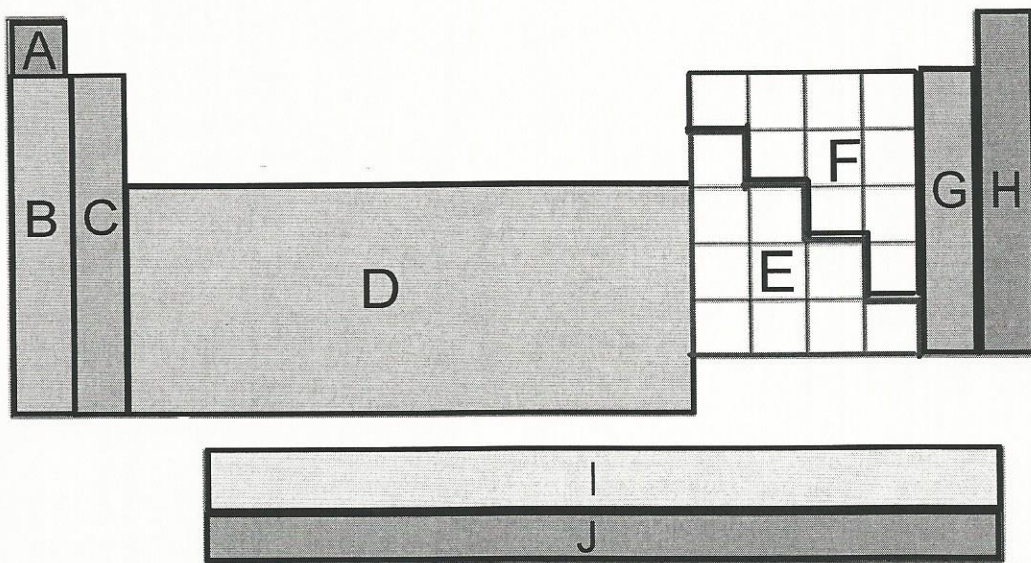
3. Write T (true) or F (false) for each of the following:

- a) The mass of a neutron is 1840 times the mass of an electron. ____
- b) The mass of a proton is 1840 times the mass of an electron. ____
- c) The ratio of the mass of a proton compared to the mass of a neutron is 1. ____
- d) The mass number of an element represents the number of protons in the atom's nucleus. ____
- e) The atomic number of an element represents the number of neutrons in the atom's nucleus. ____
- f) The nucleus of an atom has an extremely low density. ____
- g) The nucleus of an atom has an extremely low volume relative to the volume of the atom. ____
- h) The nucleus contains a very small amount of the mass of an atom. ____
- i) All bromine atoms contain 35 protons. ____
- j) All fluorine atoms contain 9 neutrons. ____

4. Fill in the blanks with the appropriate family name:

- a) The elements in this family all have a full outer orbit of electrons. _____
- b) The elements in this family are the most reactive metals. _____
- c) The elements in this family are the most reactive nonmetals. _____
- d) The elements in this family all have two valence electrons. _____
- e) The elements in this family all have five valence electrons. _____

5.



In which section(s) would you find:

a) the metals? _____

b) the nonmetals? _____

c) the halogens? _____

d) the actinides? _____

e) the alkaline earth metals? _____

f) the alkali metals? _____

g) the noble gases? _____