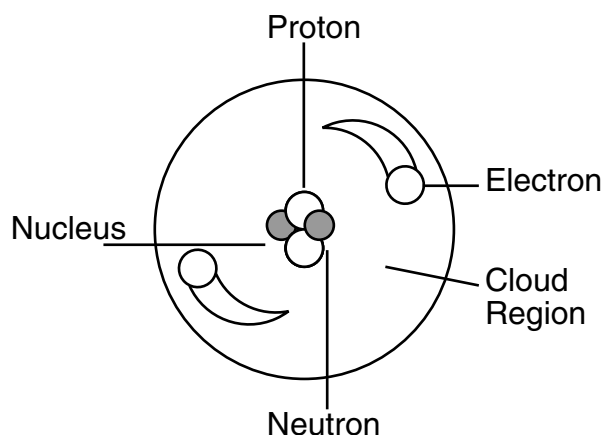


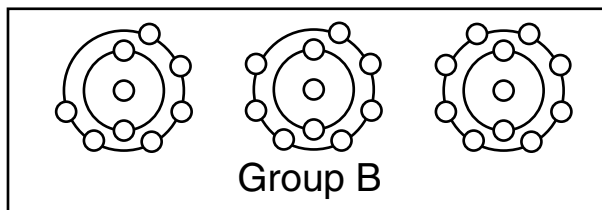
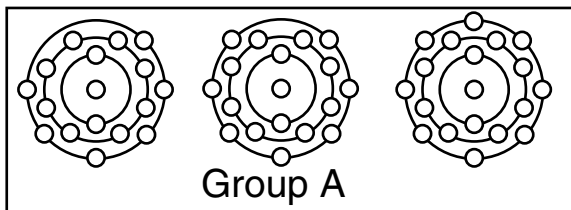
DIRECTIONS

Choose the best answer choice for each of the following questions.

1. Most metallic elements have all of these properties EXCEPT _____.
- a high melting point
 - being a good conductor of electricity
 - being easily crumbled into pieces
 - a shiny luster

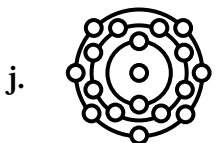
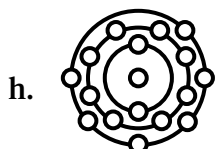
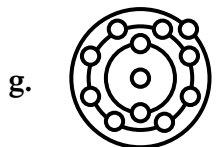
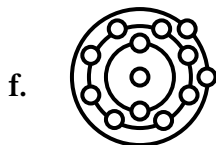


2. Which particle is located in the cloud region of the atom?
- electron
 - neutron
 - nucleus
 - proton



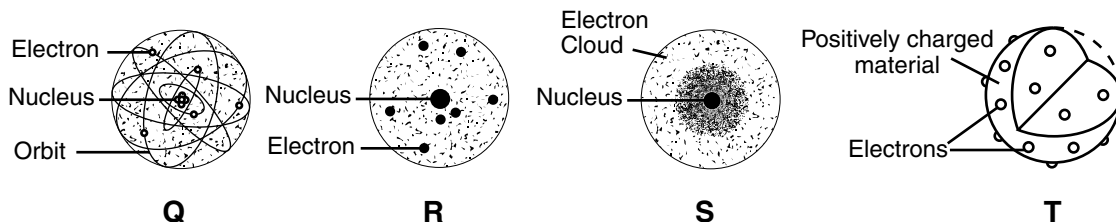
3. The atoms in Group A are different from the atoms in Group B because only the atoms in Group A have _____.
- their outer energy levels filled with electrons
 - three energy levels of electrons
 - electron arrangements typical of metals
 - electron arrangements typical of nonmetals

4. Alkali metals belong to a group of elements whose atoms have only one electron in their outer energy level. According to this definition, which of these is an atom of an alkali metal?

**Characteristics of Some Solids**

Solid	Atomic Number	Atomic Mass	Color
Rubidium	37	85.5	White
Cesium	55	132.9	Silvery-white
Tantalum	73	180.9	Gray
Thorium	90	232.0	Silvery-white

5. According to this information, which solid has an atomic mass greater than 200?
- rubidium
 - cesium
 - tantalum
 - thorium
6. Which of the following is a major characteristic of a quark?
- one of the most basic types of particles
 - a variety of an element that has different numbers of neutrons
 - a particle in the nucleus that has one of the most significant amounts of mass
 - the smallest atom identified by scientists



7. These pictures show different models of the atom proposed by scientists. Which of these is the correct order, from oldest to most recent?
- R, T, Q, S
 - T, S, R, Q
 - S, R, T, Q
 - R, S, T, Q

DIRECTIONS

Read each question. Then, on your answer sheet, mark the answer choice that you think is best.

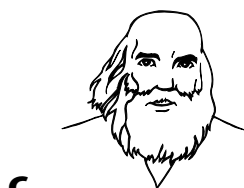
- 1** The periodic table of elements is the most useful tool in chemistry. Which of the following scientists is credited with the development of the periodic table?



Niels Bohr



Albert Einstein

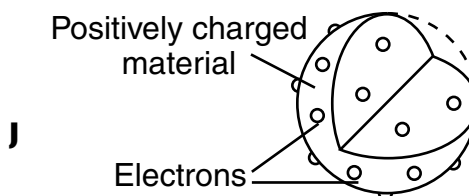
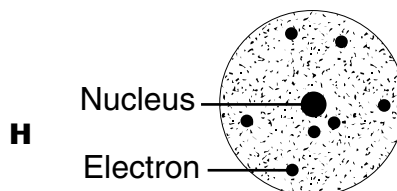
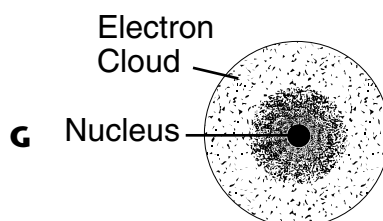
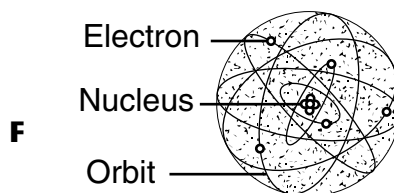


Dimitri Mendeleev



Ernest Rutherford

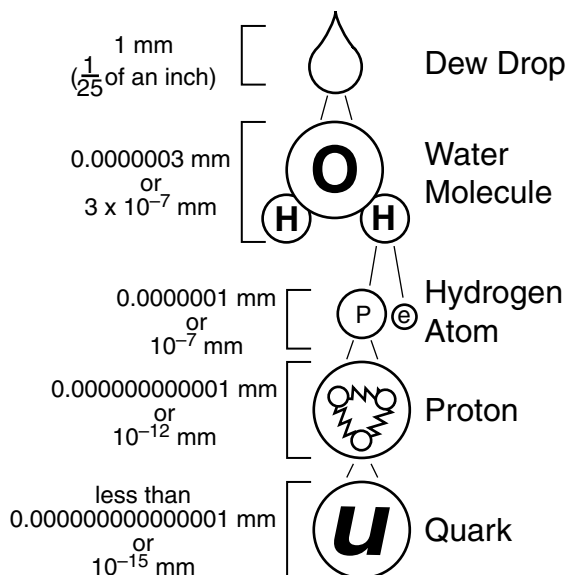
- 2** Which of these diagrams represents the modern model of the atom?



- 3** Which of these would be the best conductor of electricity?

- A** iodine
- B** silicon
- C** silver
- D** sulfur

Directions: Use the information in the diagram to answer Number 4 below.



4 Which of these statements is not true?

- F** Molecules are made up of atoms.
- G** Protons are smaller than quarks.
- H** Atoms are larger than protons.
- J** Protons are made up of quarks.

5 Which of the following is not a subatomic particle?

- A** electron
- B** neutron
- C** nucleus
- D** proton

6 The element carbon-14 can change to nitrogen 14 by losing two neutrons. Carbon-14 is

- F** an isotope of nitrogen.
- G** a radio active isotope.
- H** a stable isotope.
- J** the most common carbon isotope.

Directions: Read Number 7 below. Then, on your answer sheet, write your answer in complete sentences.

7 Patients with heart disease and high blood pressure are often placed on a salt-free diet. They are instructed that they may use a salt substitute to season their food. A common salt substitute is potassium chloride (KCl). Its chemical formula is very similar to that of everyday table salt, sodium chloride (NaCl). Based on your knowledge of the periodic table, explain why potassium chloride probably has properties similar to those of sodium chloride.

