



Atomic Structure and the Periodic Table

Multiple Choice Questions

Set 4

You may use the periodic table to answer these questions.

Tick **one** box.

1. Which element has an atomic mass of 20?
 - A. neon ☐
 - B. nickel ☐
 - C. nitrogen ☐
 - D. sodium ☐

2. Which subatomic particles make up the mass of an atom?
 - A. electrons and neutrons ☐
 - B. electrons and protons ☐
 - C. protons and neutrons ☐
 - D. protons, neutrons and electrons ☐

3. Which of the following elements is the least reactive?
 - A. bromine ☐
 - B. chlorine ☐
 - C. fluorine ☐
 - D. iodine ☐

4. How many neutrons are there in an atom of potassium?
 - A. 19 ☐
 - B. 20 ☐
 - C. 39 ☐
 - D. 58 ☐

5. Which element is found in Group 2, period 2 of the periodic table?
 - A. boron ☐
 - B. barium ☐
 - C. beryllium ☐
 - D. bismuth ☐

6. The results of the alpha particle scattering experiment led to which conclusion being made?
 - A. atoms are tiny spheres that cannot be divided ☐
 - B. negative electrons are embedded in a sphere of positive charge ☐
 - C. neutrons exist within the nucleus ☐
 - D. the mass of the atom is concentrated at the centre ☐



7. Which of the following elements will **not** form positive ions when it reacts?
- A. chlorine ☐
 - B. lithium ☐
 - C. magnesium ☐
 - D. silver ☐
8. Copper exists naturally as two isotopes, ^{63}Cu and ^{65}Cu . The abundance of ^{63}Cu is 69% and the abundance of ^{65}Cu is 31%.
What is the relative atomic mass of copper to 3 significant figures?
- A. 63.3 ☐
 - B. 63.6 ☐
 - C. 64.3 ☐
 - D. 64.4 ☐
9. Which separation method would be used to separate an insoluble solid from a liquid?
- A. chromatography ☐
 - B. filtration ☐
 - C. fractional distillation ☐
 - D. simple distillation ☐
10. How many electrons are required to fill the second energy level (shell) of an atom?
- A. 2 ☐
 - B. 6 ☐
 - C. 8 ☐
 - D. 10 ☐