



Atomic Structure and the Periodic Table

Multiple Choice Questions

Set 4

You may use the periodic table to answer these questions.

Tick **one** box.

- Which element has an atomic mass of 20?
 - neon
 - nickel
 - nitrogen
 - sodium

- Which subatomic particles make up the mass of an atom?
 - electrons and neutrons
 - electrons and protons
 - protons and neutrons
 - protons, neutrons and electrons

- Which of the following elements is the least reactive?
 - bromine
 - chlorine
 - fluorine
 - iodine

- How many neutrons are there in an atom of potassium?
 - 19
 - 20
 - 39
 - 58

- Which element is found in Group 2, period 2 of the periodic table?
 - boron
 - barium
 - beryllium
 - bismuth

- The results of the alpha particle scattering experiment led to which conclusion being made?
 - atoms are tiny spheres that cannot be divided
 - negative electrons are embedded in a sphere of positive charge
 - neutrons exist within the nucleus
 - 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