

## Inside of an Atom

### Worksheet two

#### Part I: Answer the following questions as True /False

1. The center of an atom is called the **nucleus**.
2. **Electrons** are located inside the nucleus of an atom.
3. The **proton** carries a positive electric charge.
4. **Neutrons** have no electric charge.
5. Electrons are **heavier** than protons and neutrons.
6. The **mass of an atom** is mostly concentrated in the nucleus.
7. The nucleus contains **protons and neutrons**.
8. Electrons orbit the nucleus in specific energy levels or **shells**.
9. An atom becomes **positively charged** if it gains electrons.
10. The **number of protons** in an atom determines the element's identity.
11. **All atoms** of the same element have the same number of neutrons.

12. **Isotopes** are atoms with the same number of protons but different numbers of neutrons.

13. Electrons move in **fixed paths** like planets around the sun.

14. The **electron cloud model** is the modern understanding of atomic structure.

15. Protons and neutrons are made up of smaller particles called **quarks**.

**Part II: Match the terms in Column A with the correct descriptions in Column B.**

**Put the correct letter from column "A" in the space provided in column "B"**

**Column A**

**Column B**

- |                  |   |
|------------------|---|
| A. Proton        | ..... Center of the atom containing protons and Neutrons  |
| B. Neutron       | ..... Negatively charged particle in an atom              |
| C. Electron      | ..... Has no electric charge and found in the Nucleus     |
| D. Nucleus       | ..... Positively charged particle in the nucleus          |
| E. Atomic Number | ..... The total number of protons and neutrons in an atom |

- F. Mass Number ..... Region around the nucleus where electrons are likely to be found
- G. Electron Shell ..... The number of protons in an atom
- H. Isotope ..... Atoms of the same element with different numbers of neutrons
- I. Charge of Electron ..... The average mass of all isotopes of an Element
- J. Atomic Mass .....  $-1$  (negative one)