

# The Chemistry of Minerals Notes

## I. Atomic Structure

A. **MATTER** is \_\_\_\_\_

### B. Elements

1. An **ELEMENT** is a substance that cannot be broken down into simpler substances by ordinary chemical means

2. Examples: \_\_\_\_\_

3. Symbols:

a. 1 or 2 letters (1st is capital)

b. Comes from first letters of name (may be Latin or Greek name)

### C. Atoms

1. An **ATOM** is \_\_\_\_\_

2. Structure:

a. Inside the nucleus:

i. **PROTON** (\_\_\_\_\_ charge)

ii. **NEUTRON** (\_\_\_\_\_ charge)

b. Outside the nucleus:

i. **ELECTRON** (\_\_\_\_\_ charge)

ii. Electron energy levels (\_\_\_\_\_)

3. An atom is usually **neutral** because: \_\_\_\_\_

\_\_\_\_\_

### D. Atomic Number and Mass Number

1. The **ATOMIC NUMBER** is \_\_\_\_\_

2. The **MASS NUMBER** is \_\_\_\_\_

3. To determine the **number of electrons** in an atom:

4. To determine the **number of protons** in an atom:

5. To determine the **number of neutrons** in an atom:

### F. Compounds

1. A **COMPOUND** is \_\_\_\_\_

2. Examples: \_\_\_\_\_

3. A **MINERAL** is \_\_\_\_\_

## II. Chemical Composition of Minerals

A. What is a **mineral**?

- 1.
- 2.
- 3.
- 4.
- 5.

B. Examples:

C. Non-Examples: (What is NOT a Mineral.)

1. Water
2. Pearl
3. Coal

D. Most minerals are compounds:

E. **Native Minerals** are made up of: