**2.5 Some Groups From The Periodic Table**

**Questions:**

1. **Explain why lithium, sodium and potassium have similar properties.**

Lithium Li (2,1)

Sodium Na (2,8,1)

Potassium K (2,8,8,1)

All these elements are in Group I as they have 1 outer-shell electrons each. So, they all have similar properties.

1. **The three experiments on this page should be carried out in a fume cupboard. Why?**

The three experiments on this page describes the reaction of halogens with iron. The halogens are poisonous. So these three experiments should be carried out in a fume cupboard to limit the exposure of the toxic gases.

1. **Name three elements not mentioned on these two pages, which should all behave in a similar way.**

Beryllium, Magnesium and Calcium are in Group II. So, they all behave similarly and is not mentioned on these two pages.

1. **The elements of Group O are unreactive. Explain what that means, in your own words.**

Usually, Group O elements don’t react with any other elements because they all have full outer shells of electrons. So, they can’t give or take any electrons and can’t form any compounds. So, the elements of Group O are called noble gases.

**Extra Questions:**

1. **Write down the common properties of Group I elements.**

The common properties of Group I elements are:-

a) They are metals.

b) They are so light that they float on water.

c) They are silvery and shiny when freshly cut but quickly tarnish.

d) They have low melting and boiling points, compared with the others.

e) They react violently with water.

1. **Write down the common properties of Group VII elements.**

The common properties of Group VII elements are:-

1. They are non-metals.
2. They are colored (Chlorine is a green gas, Bromine is a red liquid, Iodine is a black solid).
3. They are poisonous.
4. **Write down the common properties of Group O elements.**

The common properties of Group O elements are:-

1. They are non-metals.
2. They are gases.
3. They are colorless.
4. Usually, they don’t react with other elements.

**Notes:**

* Li is the least reactive and K is most reactive among Li, Na and K.
* I is the least reactive and Cl is most reactive among Cl, Br and I.