5.2 Note Guide

Ionic Bonding

-Definition:

Ex. Sodium chloride

Salt

-Definition:

-Electrically \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ionic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ made of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ held together by ionic bonds in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ratio

Energy Changes

-Ionization energy:

-5 steps of salt formation

1.

2.

3.

-

4.

5.

Lattice Energy

-Definition:

-Released when:

Energy is released when:

Energy must be supplied to:

Ionic Compounds

-Have no:

-Don not consist of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ form ionic compounds

Ionic bonds are strong

-Cations and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ attract

-Attractive forces are:

Properties of ionic compounds

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-Ionic solids are not \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-When salt dissolves:

-Hard:

-Brittle:

-Ions in crystal are arranged in:

-Layers positions so cation is next to an anion. Strong \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ forces \_\_\_\_\_\_\_\_\_\_\_ motion

-Takes lots of energy to:

-Cleavage plane:

Salt Crystals

-Crystal lattice definition:

-Unit cell definition: