

8. IONIC BONDING

<https://subarnam.com.np/>

Initial assessment

1. Draw dot-and-cross diagrams of the following atoms.

a. Berellium

b. sulphur

c. sodium

d. chlorine

2. Draw dot and cross diagrams of the following atoms to show only valence shell electrons.

a. Fluorine

b. calcium

c. caesium

d. oxygen

3. Show the formation of the following compounds

a. Calcium fluoride

c. sodium bromide

e. barium chloride

b. Magnesium oxide

c. potassium sulphide

4. Define ionic bonding.

5. Define bonding.

Definition

Explanation with an example

Calcium fluoride - classwork

1. Species such as NH_4^+ , CO_3^{2-} and PO_4^{3-} are examples of molecular ions.
Ionic and covalent bonds both involve an electrostatic attraction between different species.
Identify the species that are electrostatically attracted to one another in an ionic bond
[1]

2. LiH is an ionic compound.
Draw a dot-and-cross diagram of LiH.
Include **all** electrons. [2]
3. Calcium ethanedioate is formed when calcium reacts with ethanedioic acid, (CO₂H)₂. The compound contains one cation and one anion.
Draw the 'dot-and -cross' diagram of the cation present in calcium ethanedioate. Show **all** electrons. [1]
4. Radium, Ra, is an element found in Group 2 of the Periodic Table. It is a crystalline solid at room temperature and conducts electricity.
Radium chloride, RaCl₂, has a melting point of 900°C and is soluble in water.
Draw a dot-and-cross diagram to show the arrangement of **outer electrons** in RaCl₂. [1]

....

<https://subarnam.com.np/>