Homework Nine

Covalent Bonding

Q1. Join arrows to show which examples are Ionic or covalent .

Ionic	Sodium chloride
Ionic	Carbon tetra chloride
Covalent	Mercury
Covalent	Methane
Metallic	Aluminium oxide
Covalent	Glucose ($C_6H_{12}O_6$)

Q2. What is the correct definition of a molecule?

a. A group of metal atoms bonded together

b. A single metal atom

c. A group of non-metal atoms bonded together

d. A single non-metal atom

Q3 Which of the following elements are diatomic?

Helium	Oxygen	Argon	Hydrogen	Sodium	Bromine	Nitrogen
Yes	Yes	Yes	Yes	Yes	Yes	Yes
No	No	No	No	No	No	No

Q4 Which of the following substances is diatomic compound

a. CH_4
b. NO
c. NH_4Cl
d. O_2

Q5. Why do elements want to form bonds?

a. To have eight protons in the nucleus
b. To obtain a full set of outer electrons
c. To obtain a full set of inner electrons
d. To obtain an empty outer shell of electrons

Q6 In your own words explain how a covalent bond is formed.

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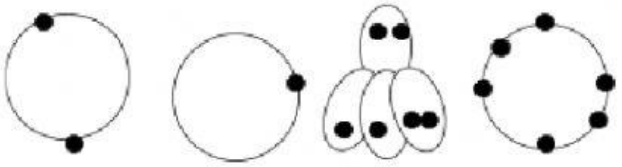
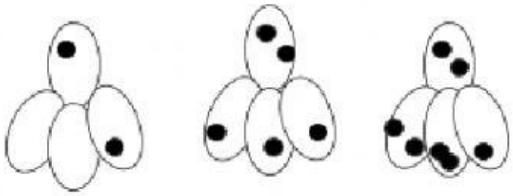
Q7. Use your data booklet select the picture which shows the outer electron for each compound..

Hydrogen



Phosphorous

Oxygen



Bromine

Q8. Draw diagrams to show how the outer electrons form covalent bonds in each of the following molecules, this must be handed in separately to the interactive worksheet:

Hydrogen (H_2)

Hydrogen chloride (HCl)

Carbon fluoride (CF_4)

Carbon dioxide (CO_2)

Q9. Drag the molecule to the name of the three dimensional shapes for the following molecules:

Methane (CH_4) Ammonia (NH_3) Water (H_20) Hydrogen chloride (HCl)

Linear Tetrahedral Y shape Pyramidal

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