## SMHW

## Quiz 3 Bonding and Structure (D)

## Quiz set by Ms. T. wint for Year 10/10Y/Sc3

1) What is a covalent bond?

- [ ] An electrostatic attraction.
- [ ] An intermolecular force.
- [ ] A shared pair of electrons.
- [ ] A transfer of electrons.

2) What is an ion?

- [ ] An atom which has lost or gained electrons.
- [ ] A neutral particle.
- [ ] An atom.
- [ ] A free moving electron.

3) Which of the following accurately describes how a magnesium ion forms

- [ ] When a magnesium atom reacts with a non-metal, magnesium gives away two electrons.
- [ ] When a magnesium atom reacts with a non-metal, magnesium gives away one electrons.
- [ ] When a magnesium atom reacts with a non-metal, magnesium takes one electrons.
- [ ] When a magnesium atom reacts with a non-metal, magnesium takes two electrons.

4) What is an ionic bond?

- [ ] An electrostatic attraction between positive and negative ions.
- [ ] A transfer of electrons.
- [ ] An electrostatic attraction between positive ions and electrons.
- [ ] A shared pair of electrons.


## 5) What structure do ionic compounds have?

- [ ] A layered structure.
- [ ] A giant lattice structure.
- [ ] A simple molecular structure.
- [ ] An irregular structure.

6) Why is water a liquid a room temperature?

- [ ] Water has a low melting point due to strong covalent bonds.
- [ ] Water has a low melting point due to weak bonds.
- [ ] Water has a low melting point due to weak electrostatic forces.
- [ ] Water has a low melting point due to weak intermolecular forces.

7) Why is sodium chloride a solid at room temperature?

- [ ] It has a high melting point due to strong covalent bonds.
- [ ] It has a high melting point due to strong intermolecular forces.
- [ ] It has a high melting point due to strong electrostatic forces.
- [ ] It has a high melting point due to weak electrostatic forces.

8) Why is graphite softer than diamond?

- [ ] Graphite is formed in layers with weaks forces between layers, so the layers slide.
- [ ] Graphite has free electrons that can move through its structure.
- [ ] Graphite has a simple molecular structure with weak bonds, so the molecules can slide past one another.
- [ ] Diamond is formed in layers with strong forces between layers, so the layers do not slide.


## 9) What is an alloy?

- [ ] A substance that has a mixture of metals atoms and other elements.
- [ ] A substance that has a mixture of non-metal elements.
- [ ] A pure metal.
- [ ] A mixture.

10) Name the type of bond in magnesium chloride.

- [ ] Covalent.
- [ ] Metallic.
- [ ] Intermolecular.
- [ ] Ionic.

11) Why can carbon nanotube be used as a lubricant?

- [ ] They are slippery due to the strong force between tubes, so the tubes can slide.
- [ ] They are slippery due to the weak force between tubes, so the tubes can slide.
- [ ] They have a free electron that can move through the structure.
- [ ] They have a giant structures with strong covalent bonds.

12) Which of the following accurately explains how magnesium and chloride ions form to make the compound magnesium chloride? You may want to draw a diagram to help.

- [ ] One magnesium atom give away two electrons, one electron to each of the two chlorine atoms.
- [ ] One magnesium atom give away two electrons to one chlorine atom.
- [ ] Two magnesium atoms each give away one electron to one chlorine atom.
- [ ] One magnesium atom give away one electron to one chlorine atom.

13) What is a metallic bond?

- [ ] An electrostatic attraction between positive metal ions and free electrons.
- [ ] A transfer of electrons.
- [ ] A shared pair of electrons.
- [ ] An electrostatic attraction between positive and negative ions.

14) The following image shows the electronic structure for which ion?

- [ ] Sulfide ion
- [ ] Oxide ion
- [ ] Magnesium ion
- [ ] Bromide ion

15) What is the electronic configuration for sodium, Na ?

- [ ] 2, 8, 2
- [ ] 10, 1
- [] 1, 8, 2
- [] 2, 8, 1


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