

# 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.
- [ ] lonic.

## 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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