

# C2 Quick Revision Questions

# Question 1

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- What are the 3 main types of chemical bond?

# Answer 1

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- Ionic, Covalent & Metallic.

# Question 2

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- What force bonds atoms in an ionic bond?

# Answer 2

.... of 50

- Electrostatic attraction.

# Question 3

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- Why do metals form giant structures?

# Answer 3

.... of 50

- Metal atoms are bonded by Metallic bonds.

# Question 4

.... of 50

- What happens to the electrons in metallic bonds?



# Answer 4

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- Electrons are delocalised and shared between the positive metal ions in a 'sea' of electrons.

# Question 5

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- What are the 3 states of matter?

# Answer 5

.... of 50

- Solids, Liquid and Gases.

# Question 6

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- What is the change in state between a solid and a gas called?

# Answer 6

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- Sublimation.

# Question 7

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- Describe the melting points of ionic compounds?

# Answer 7

.... of 50

- High melting points.

# Question 8

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- Why can ionic compounds conduct electricity when molten or dissolved in water?



# Answer 8

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- Ions are free to move, so charge can flow.

# Question 9

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- What happens to the melting points as the forces between the ions increases?

# Answer 9

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- Melting points increase.

# Question 10

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- What state are substances made up of small molecules usually in?

# Answer 10

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- Gases or liquids.

# Question 11

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- What happens to the electrons between atoms in a covalent bond?

# Answer 11

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- The electrons are shared.

# Question 12

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- What type of bond would be formed between Sodium and Chlorine?



# Answer 12

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- Ionic bonds.

# Question 13

- What type of bond would be formed between 2 oxygen atoms?

# Answer 13

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- Covalent bonds.

# Question 14

- In sodium chloride, which ion has gained an electron and which has lost an electron

# Answer 14

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- Sodium loses an electron and become +1
- Chlorine gains an electron and becomes -1

# Question 15

- What is formed if 2 pairs of electrons are shared between 2 atoms?

# Answer 15

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- A double covalent bond

# Question 16

- What type of diagram shows how electrons are shared in a molecule?



# Answer 16

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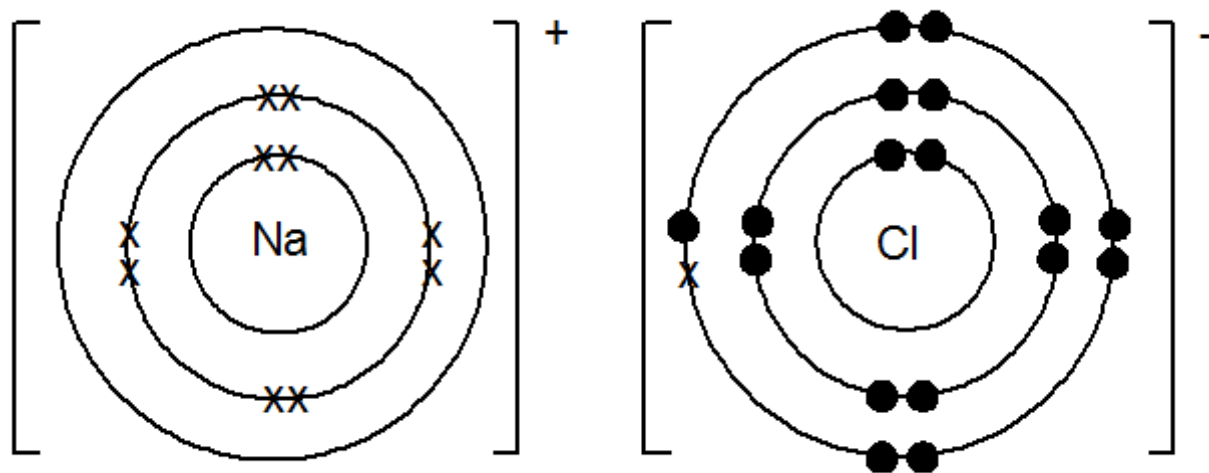
- Dot and cross

# Question 17

- Draw a dot and cross diagram to show Sodium Chloride

# Answer 17

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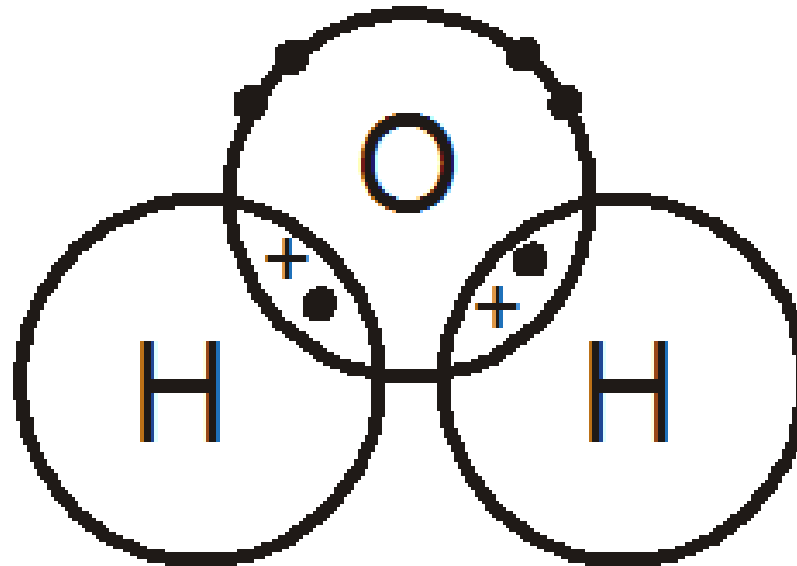


# Question 18

- Draw a dot and cross diagram for water (H<sub>2</sub>O)

Answer 18

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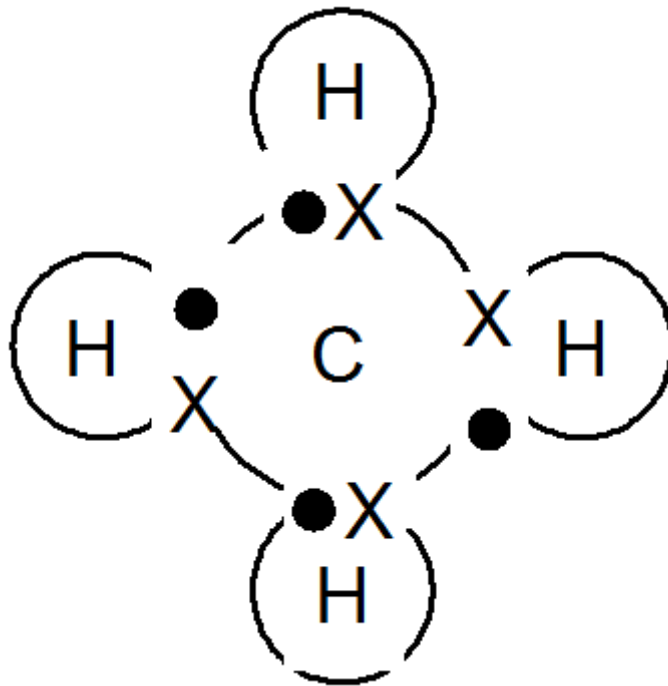


# Question 19

- Draw a dot and cross diagram for water ( $\text{CH}_4$ )

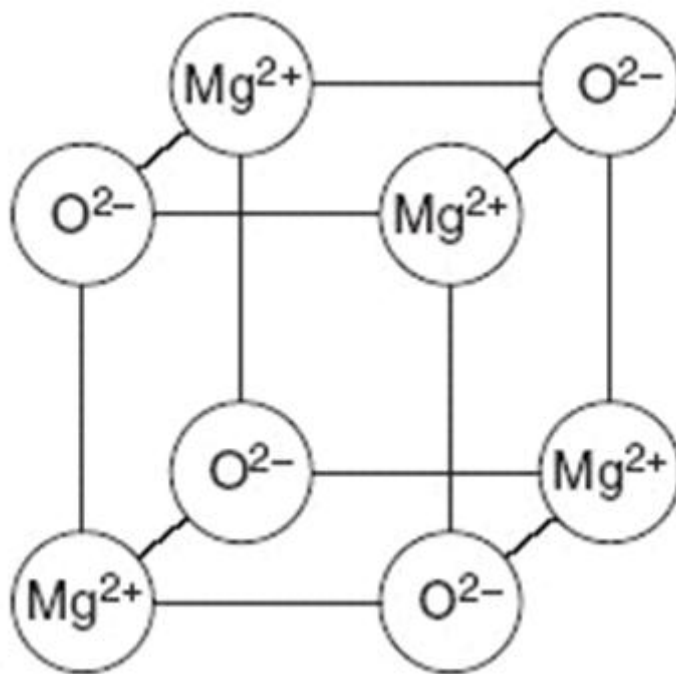
Answer 19

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# Question 20

- What is the empirical formula for the compound below?





# Answer 20

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- MgO

# Question 21

- Describe metallic bonding?

# Answer 21

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- Positive ions in a sea of moving negative electrons (delocalise electrons)

# Question 22

- Which forces are broken when a metal is melted?

# Answer 22

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- Metallic bonds

# Question 23

- Which forces are broken when an ionic compound is melted?

# Answer 23

.... of 50

- Ionic bonds

# Question 24

- Why does Magnesium have a higher melting point than Sodium?



# Answer 24

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- Magnesium has more delocalised electrons than sodium.

# Question 25

- Name the 3 states of matter

# Answer 25

.... of 50

- Solid, liquid, gas

# Question 26

- What happens to the forces between particles in melting?

# Answer 26

.... of 50

- The forces between particles become less

# Question 27

- What happens to the position and arrangement of particles as a substance is melted?

# Answer 27

.... of 50

- The distance between particles increases and the arrangement becomes more random.

# Question 28

- When does an ionic compound conduct electricity?



# Answer 28

.... of 50

- When it is molten or aqueous (dissolved in water)

# Question 29

- What type of structure does Sodium Chloride have?

# Answer 29

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- Giant ionic lattices

# Question 30

- Why do small covalent molecules not conduct electricity?

# Answer 30

.... of 50

- They do not have charged particles.

# Question 31

- What is a polymer?

# Answer 31

.... of 50

- A large molecule

# Question 32

- What are the 2 methods of making a polymer?



# Answer 32

.... of 50

- Addition
- Condensation

# Question 33

- What types of bonds hold monomers together in a polymer?

# Answer 33

.... of 50

- Covalent bonds

# Question 34

- What are the different chains of polymers held together by?

# Answer 34

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- Intermolecular forces

# Question 35

- Why does PVC have a low melting point?

# Answer 35

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- It had weak intermolecular forces

# Question 36

- Describe the melting point of a polymer with stronger intermolecular forces.



# Answer 36

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- High melting point

# Question 37

- What feature must a monomer have for additional polymerisation?

# Answer 37

.... of 50

- Carbon carbon double bond

# Question 38

- What is the structure and bonding of diamond and silicon dioxide?

# Answer 38

.... of 50

- Giant covalent structure

# Question 39

- Name 2 physical properties of diamond

# Answer 39

.... of 50

- Lustrous
- very hard
- very high melting point
- insoluble in water
- does not conduct electricity

# Question 40

- Why does graphite conduct electricity?



# Answer 40

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- It has delocalised electrons

# Question 41

- What is an alloy?

# Answer 41

.... of 50

- A metal is mixed with another metal to change the overall physical properties.

# Question 42

- Why are metals malleable and ductile?

# Answer 42

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- The layers of atoms are able to slide over one another

# Question 43

- Why are alloys harder than pure metals?

# Answer 43

.... of 50

- The different sizes of atoms distort the layers in the structure preventing them from sliding over each other.

# Question 44

- How many covalent bonds does each carbon have in diamond?



# Answer 44

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- 4 covalent bonds per carbon

# Question 45

- What is the name of the shape of the carbon arrangement in diamond?

# Answer 45

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- tetrahedral

# Question 46

- Why does diamond not conduct electricity?

# Answer 46

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- It does not have delocalised electrons

# Question 47

- Describe the structure of graphite

# Answer 47

.... of 50

- Layers of hexagonal rings held together by weak intermolecular forces

# Question 48

- Why can graphite be used as a lubricant?



# Answer 48

.... of 50

- The layers can slide over each other

# Question 49

- What is a fullerene?

# Answer 49

.... of 50

- Molecules of carbon atoms with hollow shapes based on hexagonal rings.

# Question 50

- What is a fullerene?

# Answer 50

.... of 50

- High tensile strength
- High electrical conductivity
- High thermal conductivity