QUESTION	ANSWER

Quiz Cards: Bonding, Structure & Properties

How to use the quiz cards to learn the key facts

1) Take 6 quiz cards at a time and read through them

2) Cover up the answer side of the page.

Question	Answer

3) Take the first quiz card and ask yourself the question. Either write the answer down or say it out loud.

4) Check your answer using the answer side of the card.

5) Do this question again until you get it right.

6) Repeat the process for the second question.

7) Before going onto the third question repeat question one and two.

8) When you have gone through all of the questions try and do them in a random order to really test your knowledge.

ONCE YOU HAVE LEARNT THEM ALL ….

9) Complete some exam questions to apply your knowledge.

10) Check your answer with the mark scheme and correct any errors in green pen.

11) Repeat steps 9-10 until you get the answers correct all of the time.

QUESTION	ANSWER
Which elements react to form ionic compounds?	Metals and Non-metals
Covalent bonds form between the atoms of which elements?	Non-metals.
Describe how ions are formed from atoms.	By the loss or gain of one or more electrons.
What is an ionic bond?	The electrostatic attraction between oppositely charged ions.
How is a covalent bond formed?	A pair of electrons is shared by two atoms. Each atom provides one of the electrons in the bond.
Describe the properties of a typical ionic compound.	Hard, brittle, high melting point, high boiling point, conducts electricity when molten or in aqueous solution.

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Explain why ionic compound do not conduct electricity when solid.	When solid the ions are unable to move around freely. They are held in a fixed lattice structure.
Describe the properties of simple covalent molecules.	Low melting points and low boiling points. Unable to conduct electricity.
Explain why simple molecules have low melting points.	There are only weak forces between the molecules (intermolecular forces). These forces are easily overcome when the substance melts.
What are polymers?	Very large molecules formed when many monomer molecules join together.
Describe the properties of giant covalent structures.	Very high melting points. Do not conduct electricity.
Describe the bonding in diamond	Each carbon atom forms four covalent bonds with other carbon atoms in a giant covalent structure.

QUESTION	ANSWER
Why does diamond have a very high melting point?	Each carbon is joined to four others by strong covalent bonds. A large amount of energy is needed to break the covalent bonds.
Describe the bonding in graphite	Each carbon atom forms three covalent bonds with three other carbon atoms, forming layers of hexagonal rings.
Why is graphite soft and slippery?	The layers are free to slide over each other because there are no covalent bonds between the layers.
Why is graphite able to conduct electricity?	One electron from each carbon atom is delocalised. These delocalised electrons allow it to conduct thermal energy and electricity.
Describe the bonding in metals.	They consist of giant structures of atoms arranged in a regular pattern. The electrons in the outer shell of atoms are delocalised and so are free to move through the whole structure. The sharing of delocalised electrons gives rise to strong bonds.
Describe the properties of metals.	High melting points and high boiling points. Malleable and ductile. Good conductors of electricity and heat.

QUESTION	ANSWER
Explain the properties of metals.	They have giant structures of atoms with strong metallic bonding. This means that most have high melting and boiling points. The layers of atoms are able to slide over each other. This means they can be bent and shaped. They are good conductors of electricity because the delocalised electrons carry electrical charge through them.

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