

C3 – Ionic , covalent	
Question	Answer
1. Why do ionic compounds have very high melting and boiling points?	The bonds holding the ions together are very strong and require a lot of energy to break them.
2. Why don't ionic compounds conduct electricity when solid?	The ions are not free to move.
3. When do ionic compounds conduct electricity?	When they are molten (melted) or when dissolved in water, as the ions are free to move and so can carry charge (current)
4. Why do simple molecular compounds have low melting and boiling point?	The intermolecular bonds are very weak and require little energy to break them.
5. Why so covalent molecules not conduct electricity?	The molecules do not have an overall charge to carry the current
6. Name 2 allotropes of carbon.	Diamond and graphite
7. How many carbon atoms surround each other carbon atom in diamond?	4
8. Why is diamond hard with a high melting and boiling point?	The inter and intramolecular bonds within diamond are all very strong.
9. How many carbon atoms surround each other carbon atom in graphite?	3. They form hexagonal rings with no covalent bonds between layers
10. Why is graphite soft and slippery?	The intermolecular bonds between layers are very weak, allowing layers to slide.
11. Why can graphite conduct electricity?	Each atom has a pair of electrons that are not involved in a bond and are free to move from atom to atom.

