C3 standardised homework

A screenshot of a cell phone

Description automatically generated

This kettle is formed of a huge number of copper atoms bonded metallically, meaning it is very strong. Each metal ion is bonded electrostatically to many other metal ions, surrounded by a ‘sea’ of delocalised electrons. This copper is arranged in a giant lattice structure, therefore there is a large number of electrostatic forces that need to be broken. A lot of energy is needed to overcome these bonds, so a lot of heat is needed to change the state.