

## Question 26 (3 marks)

Some materials become superconductors when cooled to extremely low temperatures. 3  
Identify THREE properties of superconductors.

Below their critical temperature, superconductors will offer no resistance to current. This is explained by the Cooper pairing of electrons in the BCS theory. They will also exclude external magnetic fields, known as the ~~Meissner~~ Meissner effect. In addition, ceramic superconductors (which generally have higher critical temperatures) are very brittle, and chemically unstable in some environments.