203: Electrical installations technology  
**Worksheet 18: Earth loop impedance**

**Answer guide**

Try the following problems.

1. **List the typical components that make up the earth loop impedance path.**
2. **Draw a labelled circuit diagram showing the earth loop impedance path for a TN‑C‑S system.**
3. **List the two parts of the fault path;**
4. **Describe the difference between TN-S and a TN-C-S system**
5. **What is the correct formula for calculating circuit earth fault loop impedance:**