Unit 114: Electrotechnical systems and equipment

# Worksheet 1: Know the underlying principles for electrotechnical work 1 (tutor)

1. Briefly explain the following electrical quantities: Volt, Ohm, Ampere, Watt

Volt: The standard unit of potential difference and electromotive force, formally defined to be the difference of electric potential between two points of a conductor carrying a constant current of one ampere.

Ohm: Aunit of an electric circuit that is defined as the electrical resistance.

Amp: An ‘amp’, short for ampere, is a unit of electrical current.

Watt: A watt is a measure of power.

1. In respect of their charge, what is a proton, a neutron and an electron?

**Protons** are positively charged.

**Neutrons** are neutral.

**Electrons** are negatively charged.

1. What are the equations for calculating the voltage, current and resistance in a circuit?

V = IR

I = V/R

R= V/I

1. How is electricity distributed throughout the UK?

Electricity is generated in power stations and transported across the UK via the National Grid.