

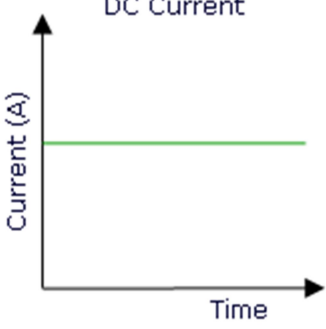
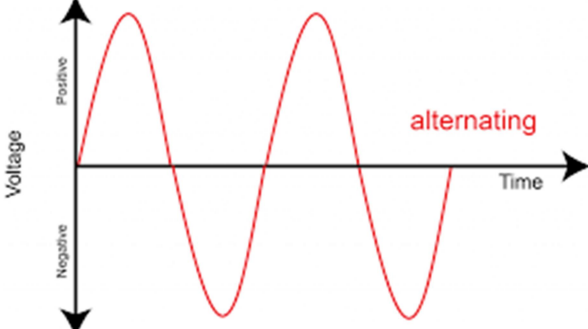
Second Term Grade 7

Physics Notes

Book 3 Unit 7 “Electricity and Energy”

Q) Differentiate between Alternating Current and Direct Current

Ans)

Direct Current	Alternating Current
<p>When the voltage applied is steady and doesn't change its value. Then, electricity always flows in one direction.</p> <p>Dry cell and Batteries give steady voltage.</p>	<p>When voltage changes its direction very rapidly, the current flows backward and forward. This is called AC.</p>
<p>DC Current</p>  <p>The graph shows Direct Current (DC). The vertical axis is labeled 'Current (A)' and the horizontal axis is labeled 'Time'. A horizontal green line is drawn at a constant level, indicating that the current remains steady and does not change over time.</p>	 <p>The graph shows Alternating Current (AC). The vertical axis is labeled 'Voltage' with 'Positive' and 'Negative' directions indicated. The horizontal axis is labeled 'Time'. A red sinusoidal wave oscillates above and below the zero line, representing the periodic change in voltage direction. The word 'alternating' is written in red next to the wave.</p>

Define:

Electrical Power:

It is the amount of electrical energy transferred or converted by an electrical circuit. Electrical power is measured in **watts (W)** and **kilowatts (kW)**. It can be calculated using this formula:

Electrical power (W) = voltage (V) x current (I)

Q What fuse should you fit in the plug of

a) a 3000 W electric heater

current = Power /voltage

$$= 3000 / 250$$

$$= 12A$$

A 13 A fuse would be suitable for heater

b) a 1000 W toaster

current = Power /voltage

$$= 1000 / 250$$

$$= 4A$$

A 5A fuse would be

Suitable for toaster