

LESSON NOTES-9

School: PENANG SANGAM HIGH

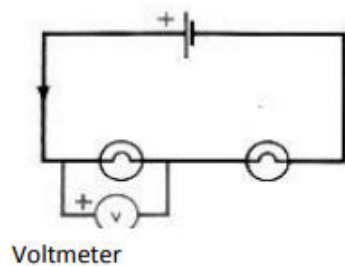
Year/Level: 11C/D

Subject: APPLIED TECHNOLOGY

Strand	AT 11.4. BASIC HOME IMPROVEMENT
Sub Strand	AT 4.1. General Trade Skills
Content Learning Outcome	AT11.4.1.1 Demonstrate knowledge and develop basic practical skills in electrical system.

ELECTRICITY

1. A voltmeter can be connected to find the voltage.



2. Resistance- are designed to have specific values or impedances. It is measured in Ohms.  
(note: Impedance is the amount of opposition that a circuit presents to current  
Or voltage charge).



3. Ohms- is the amount of electrical resistance that exists in an electrical circuit when one amp of current is flowing with one volt being applied to the circuit.

Formula to calculate electrical values is:

Ohms Law

$$I = \frac{V}{R}$$

## Example of parallel circuit with calculations.

A p.d of 6V is applied to two resistors (of 3 and 6  $\Omega$ ) connected to the series

Calculate:

1. The combined resistance
2. The current flow
3. The current across the 3  $\Omega$  resistor

$$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2}$$

The combined resistance

$$\frac{1}{R} = \frac{1}{3} + \frac{1}{6} = \frac{2+1}{6} = \frac{3}{6} = \frac{1}{2}$$

$$R = 2 \Omega$$

The current flow

$$V = I \times R$$

$$6 = I \times 2$$

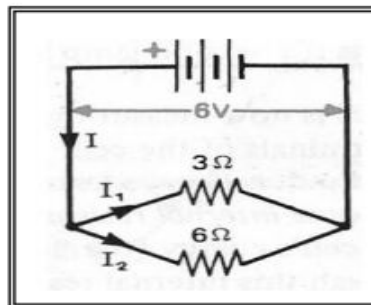
$$I = \frac{6}{2} = 3A \text{ in the main circuit}$$

The current across the 3  $\Omega$  resistor

$$V = I_1 \times R$$

$$6 = I_1 \times 3$$

$$I_1 = \frac{6}{3} = 2A \text{ in the } 3\Omega \text{ resistor}$$



## SHORT ANSWER QUESTIONS

1. Name the meter which is used to find the voltage.

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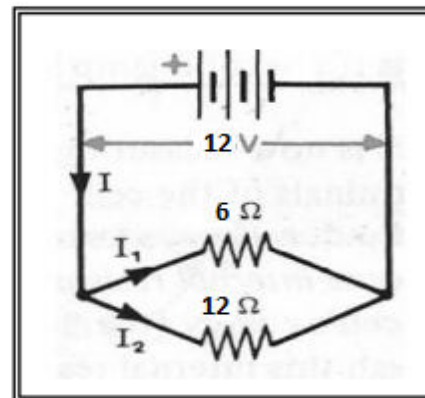
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2. A p.d of 12V is applied to two resistors (of 6 and 12 $\Omega$ ) connected to the series

Calculate:

1. The combined resistance
2. The current flow
3. The current across the 6  $\Omega$  resistor

The combined resistance



The current flow

The current across the 6  $\Omega$  resistor

**THE END**