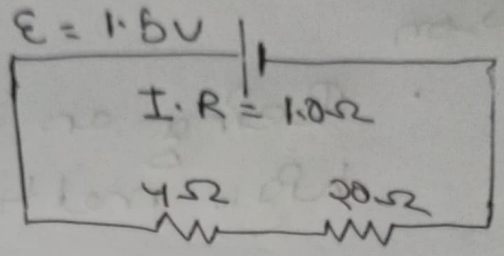
1) A fuse is a peice of wire of a material with a very low melting Point, that is its melts and breaks as soon as its temperature gets higher than its melting Point. The material used for making fuse wires are mainly made up of tin, lead or zinc.

2) Solution :-



Given :- $\varepsilon = 1.5\,V$

$r = 1\,\Omega$

Current, $I = \frac{\varepsilon}{r+R}$ — (1)

Now, $R = (4+20)\,\Omega = 24\,\Omega$

$r = 1\,\Omega$

$R + r = 25\,\Omega$

$I = \frac{1.5}{25} = 0.06\,A$

Thus 0.06 A current flows in the circuit.

(ii) we know, $V = IR$

$= 0.06 \times 4 = 0.24\,V$

P.d across $4\,\Omega = 0.24$

(iii) Voltage drop when current is flowing $= Ir = 0.06 \times 9 = 0.06$ volt.

(v) Potential difference across cell.

$V = IR$

$\Rightarrow 0.06 \times 24$

$\Rightarrow 1.44$ volt

3) Tungsten is used for making filament of an electric bulb due to the following reason

- Being an alloy it has a very high melting point
- It has very high resistivity So it does not burn easily at room temperature
- The lamp glows at high temperature