

- 5 (a) Define the *volt*.

.....
 [1]

- (b) Fig. 5.1 shows a network of three resistors.

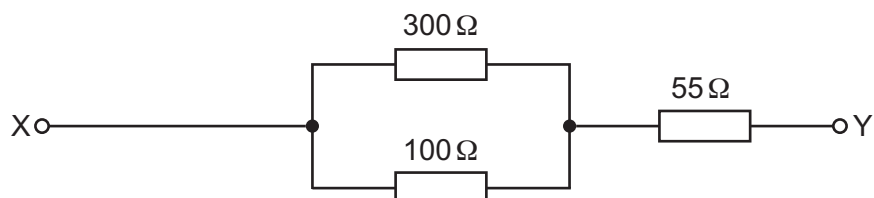


Fig. 5.1

Calculate:

- (i) the combined resistance of the two resistors connected in parallel

combined resistance = Ω [1]

- (ii) the total resistance between terminals X and Y.

total resistance = Ω [1]

- (c) The network in (b) is connected to a power supply so that there is a potential difference between terminals X and Y. The power dissipated in the resistor of resistance 55 Ω is 0.20 W.

- (i) Calculate the current in the resistor of resistance:

1. 55 Ω

current = A

2. 300 Ω.

current = A
 [3]

(ii) Calculate the potential difference between X and Y.

potential difference = V [1]

[Total: 7]