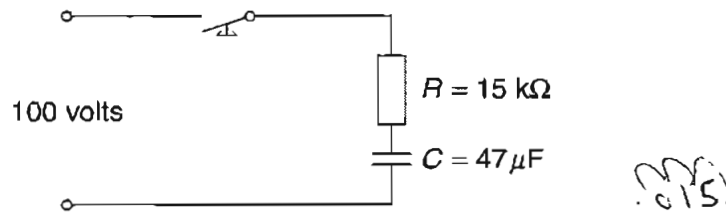


Question 20 (5 marks)

An electrical circuit is shown.



Calculate, showing all working:

- (a) the time constant for the circuit; 2

$$6666.66 \div 47$$

$$= 141.84 \text{ (2 dec Place)}$$

- (b) the maximum circuit current; 1

$$100 \div 0.015 =$$

$$6666.66 \text{ Amps}$$

- (c) the value of resistance to be added to change the time constant to one second. 2

$$16 \text{ k}\Omega$$
