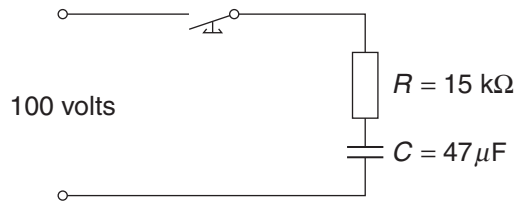


**Question 20** (5 marks)

An electrical circuit is shown.



Calculate, showing all working:

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

.....  
.....  
.....  
.....

- (b) the maximum circuit current; **1**

.....  
.....

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

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