

Question 18 (5 marks)

Resistor Colour Code Chart

| <i>Colour</i> | <i>Value</i> | <i>Multiplying factor</i> | <i>Tolerance</i> |
|---------------|--------------|---------------------------|------------------|
| Black | 0 | 1 | – |
| Brown | 1 | 10 | 1% |
| Red | 2 | 100 | 2% |
| Orange | 3 | 1 000 | – |
| Yellow | 4 | 10 000 | – |
| Green | 5 | 100 000 | 0.5% |
| Blue | 6 | 1 000 000 | 0.25% |
| Violet | 7 | – | 0.1% |
| Grey | 8 | – | – |
| White | 9 | – | – |
| Gold | – | 0.1 | 5% |
| Silver | – | 0.01 | 10% |

- (a) Use the Resistor Colour Code Chart to find the colour code of the resistor. **2**

| <i>Value</i> | <i>Tolerance</i> | <i>Band 1</i> | <i>Band 2</i> | <i>Band 3</i> | <i>Band 4</i> |
|--------------|------------------|---------------|---------------|---------------|---------------|
| 680 | 1% | | | | |

- (b) Determine the maximum value of the following resistor, showing all working. **3**

| <i>Band 1</i> | <i>Band 2</i> | <i>Band 3</i> | <i>Band 4</i> |
|---------------|---------------|---------------|---------------|
| Red | Black | Blue | Gold |

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