Question 18 (5 marks)

Resistor Colour Code Chart

Colour	Value	Multiplying factor	Tolerance
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**

Value	Tolerance	Band 1	Band 2	Band 3	Band 4
680	1%	Blue	Grey	Black	Brown
		6	8	0	1 %

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

Band 1	Band 2	Band 3	Band 4
Red	Black	Blue	Gold

20 000 000 ± 5%

20 MΩ ± 5%

20 000 000 + 5% = 21 000 000

= 21 MΩ