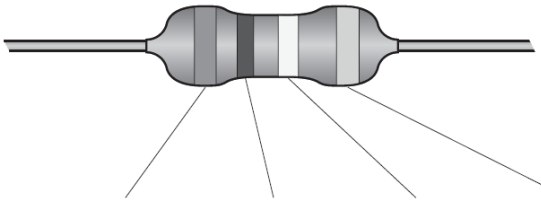
Practical Electronics - Resistors

You will need this information to answer question 1

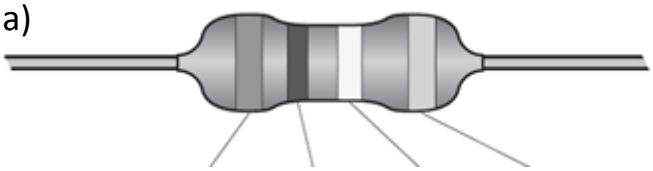
4-band Resistor



Colour	*1st band value*	*2nd band value*	*Multiplier*	*Tolerances*
Black	0	0	× 1	
Brown	1	1	× 10	±1%
Red	2	2	× 100	±2%
Orange	3	3	× 1000	±3%
Yellow	4	4	× 10000	±4%
Green	5	5	× 100000	±0·5%
Blue	6	6	× 1000000	±0·25%
Violet	7	7	× 10000000	±0·10%
Grey	8	8	× 100000000	±0·05%
White	9	9	× 1000000000	
Gold			× 0·1	±5%
Silver			× 0·01	±10%
No band				±20%

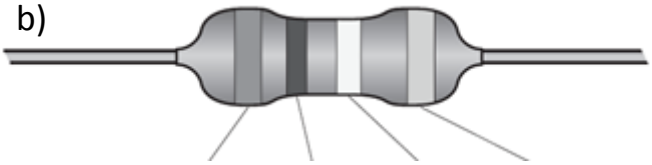
1. Determine the resistance and tolerance of each resistor shown below.

a)



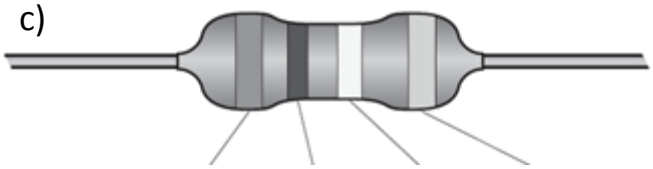
Brown Black Brown Gold

b)



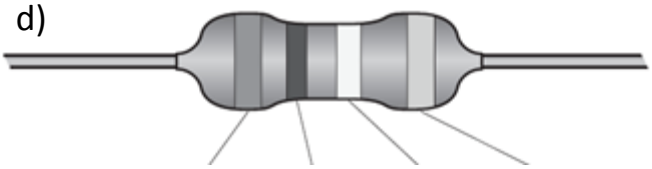
Orange Violet Red Brown

c)



Red Red Orange Silver

d)



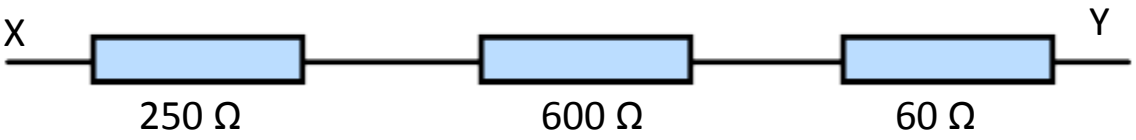
Green Black Yellow No band

2. For each resistor above determine the maximum and minimum resistance of the resistor using the tolerance values from question 1. [8]

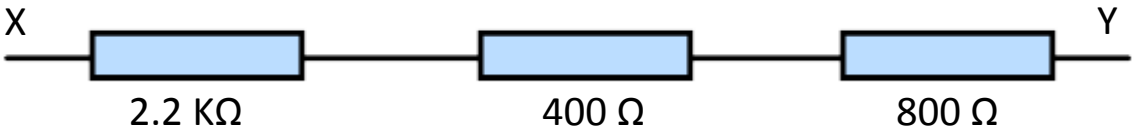
3. For each resistor above write down its resistance in B.S. notation. [4]

4. Calculate the total resistance between X and Y for the questions below;

a)



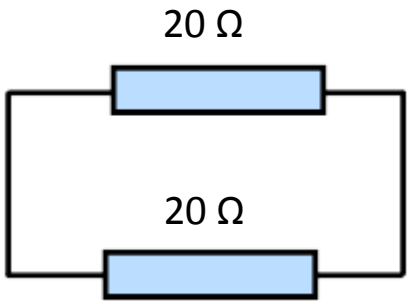
b)



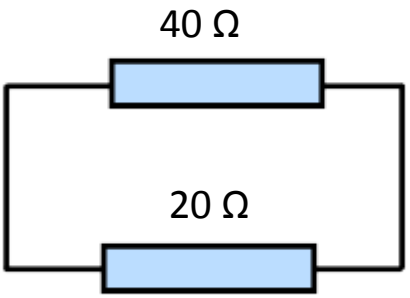
[4]

5. Calculate the effective resistance of the resistors in parallel for the questions below;

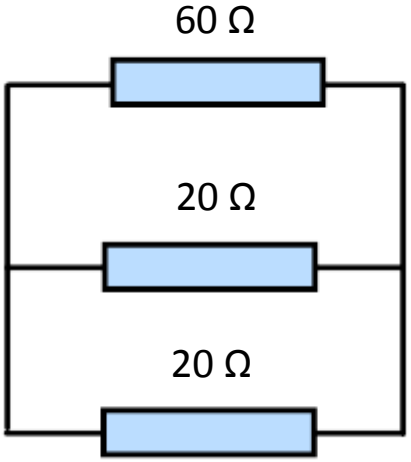
a)



b)



c)



[9]

Total of 25 Marks