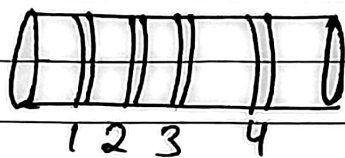


Colour Coding of Resistors

Commercially used carbon resistors have high resistances and are compact.

Carbon resistors are small in size and hence their values are given using a colour code.



There are co-axial bands (rings) \rightarrow 4 in number

1 & 2 \rightarrow gives magnitude (significant figure)

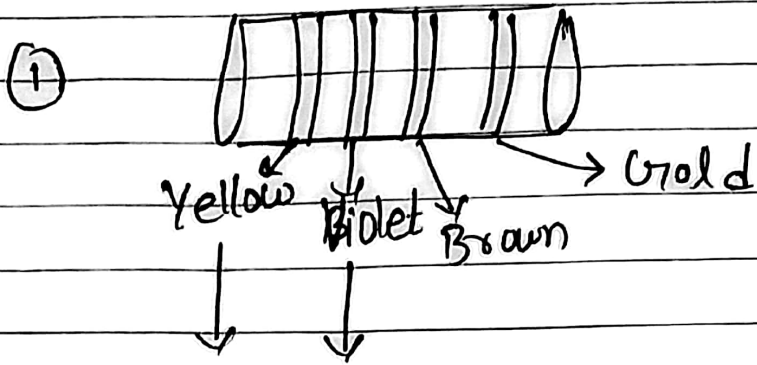
3 \rightarrow gives multiplier (order of Magnitude)

4 \rightarrow gives tolerance (variation in % around given value)

Table

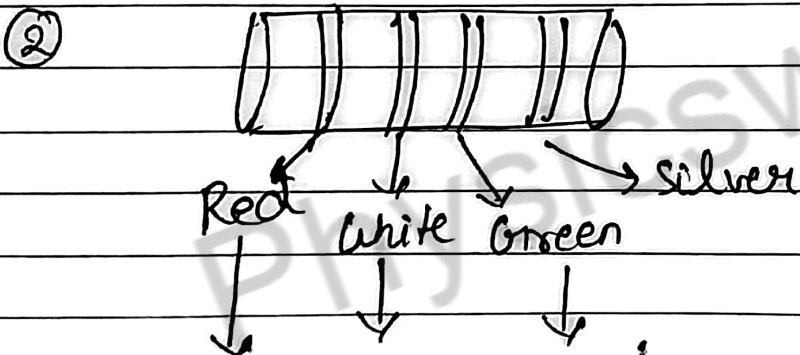
Colour	1, 2 / Number	3 / Multiplier	4 / Tolerance % (+/-)
Black	0	10^0	
Brown	1	10^1	Gold \rightarrow 5%
Red	2	10^2	Silver \rightarrow 10%
Orange	3	10^3	No colour \rightarrow 20%
Yellow	4	10^4	
Green	5	10^5	
Blue	6	10^6	
Violet	7	10^7	
Grey	8	10^8	
White	9	10^9	

Q1) Find Resistance of a Carbon resistor as shown



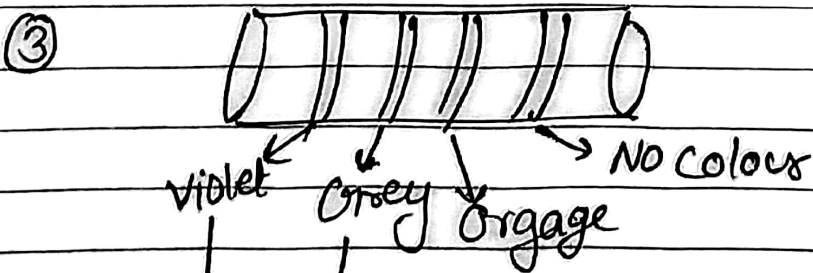
$$47 \times 10^1 \pm 5\%$$

$$\Rightarrow (47 \times 10^1 \pm 5\%) \Omega$$



$$29 \times 10^5 \pm 10\%$$

$$29 \times 10^5 \Omega \pm 10\%$$



$$78 \times 10^3 \pm 20\%$$

$$= 78 \times 10^3 \Omega \pm 20\%$$