

Q5

Question	if decrease	if there is no change	if increases
a	✓		✓
b	✓		
c	✓		
d			✓
e	✓		

$$R = \frac{3}{1} A$$

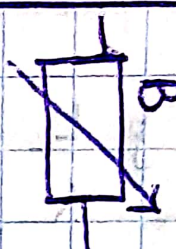
Q

$$R_2 = \frac{L_1 \times R_1}{L_2}$$

$$= \frac{2200 \times 100 \text{ m}\Omega}{750}$$

$$= 293.33 \text{ m}\Omega$$

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Linear Resistor Type	Symbol	Characteristics	Construction	Applications
Carbon		Resistance decreases with an increase in voltage	M	S
Rheostat		H	N	T
Non-linear resistor type	Symbol	Characteristics	Construction	Application
NTC Thermistor		I	O	U
Voltage dependent Resistor VDR		G	Q	M

d

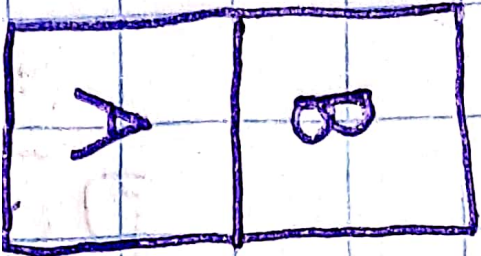
e

Material	Reactivity	Conductor	Insulator	Semiconductor	Rectifying
Aluminium	$2.82 \times 10^{-8}^*$	✓			C4
Bray-63%	$7.1 \times 10^{-8}^*$	✓			
Carbon	3×10^{-5}	✓			
(graphite)					
Ceramic (porcelain)	1×10^{14}		✓		I2
Copper	$1.68 \times 10^{-8}^*$	✓		✓	C2
Germanium	4.6×10^{-1}				
Glass	10×10^{11}		✓		I3
Gold	$2.44 \times 10^{-8}^*$	✓			C3
lead	2.2×10^{-6}	✓			
Mica	1×10^{10}		✓		T3
Nichrome	1.10×10^{-6}	✓			
PVC	1×10^{12}		✓		I4
Hard rubber	1×10^{15}		✓		I1
Silicon	6.40×10^{-2}			✓	
Silver	$1.59 \times 10^{-8}^*$	✓			C1
Carbon steel	1.43×10^{-7}	✓			
Tin	1.09×10^{-7}	✓			
Tungsten	$5.65 \times 10^{-8}^*$	✓			

197 (a) More than 1 MS

(b) Increase

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proportional to the voltage and

proportional to the resistance