

PHYSICS

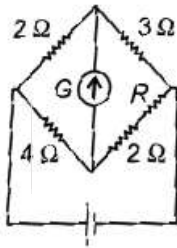
**CAPACITORS AND CURRENT
ELECTRICITY**

81. There are two identical capacitors, the first one is A uncharged and filled with a dielectric of constant K while the other one is charged to potential having air between its plates. If two capacitors are joined end to end, the common potential will be

- (1) $\frac{V}{K-1}$
- (2) $\frac{KV}{K+1}$
- (3) $\frac{KV}{K+1}$
- (4) $\frac{V}{K+1}$

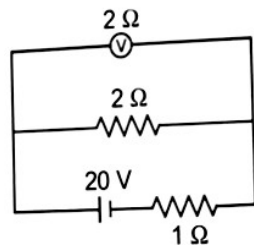
82. If there is no deflection in the galvanometer in the given network, then the value of resistance R is

- (1) 1 Ω
- (2) 2 Ω
- (3) 3 Ω
- (4) 4 Ω



83. In the given electrical circuit the reading of voltmeter is

- (1) 10 V
- (2) 5 V
- (3) 20 V
- (4) 4 V

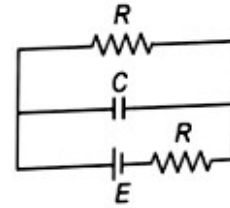


84. A uniform wire of resistance 20 Ω is melted and recast into a wire of length triple of its original length, then new resistance will be

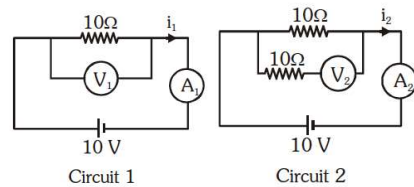
- (1) 60 Ω
- (2) 90 Ω
- (3) 180 Ω
- (4) 120 Ω

85. The maximum charge stored on the capacitor C in the given circuit is

- (1) CE
- (2) $\frac{3CE}{2}$
- (3) $\frac{CE}{2}$
- (4) Zero



86. In the circuits shown below, the readings of ideal voltmeters and the ideal ammeters will be



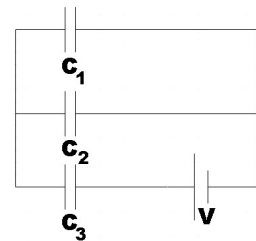
- (1) $V_2 > V_1$ and $i_1 = i_2$
- (2) $V_1 > V_2$ and $i_1 > i_2$
- (3) $V_1 = V_2$ and $i_1 = i_2$
- (4) $V_2 > V_1$ and $i_1 > i_2$

87. Given a number of capacitors labelled as 8 μF, 250 V. Find the minimum number of capacitors needed to get an arrangement equivalent to 16 μF, 1000 V is

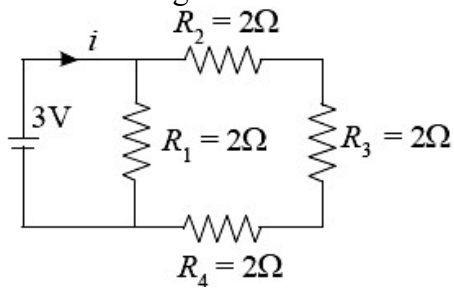
- (1) 4
- (2) 16
- (3) 32
- (4) 64

88. What would be the voltage across C₃?

- (1) $\frac{(C_1 + C_2)V}{C_1 + C_2 + C_3}$
- (2) $\frac{C_1 V}{C_1 + C_2 + C_3}$
- (3) $\frac{C_2 V}{C_1 + C_2 + C_3}$
- (4) $\frac{C_3 V}{C_1 + C_2 + C_3}$

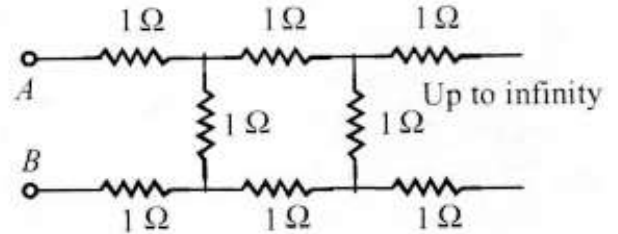


89. What is the current (I) in the circuit, as shown in the figure?



- (1) 1.2 A
- (2) 0.5 A
- (3) 1 A
- (4) 2 A

90. The resistance between the terminal points A and B of the given infinitely long circuit will be



- (1) $(\sqrt{3} - 1)\Omega$
- (2) $(1 - \sqrt{3})\Omega$
- (3) $(1 + \sqrt{3})\Omega$
- (4) $(2 + \sqrt{3})\Omega$



PARISHRAMA
NEET ACADEMY