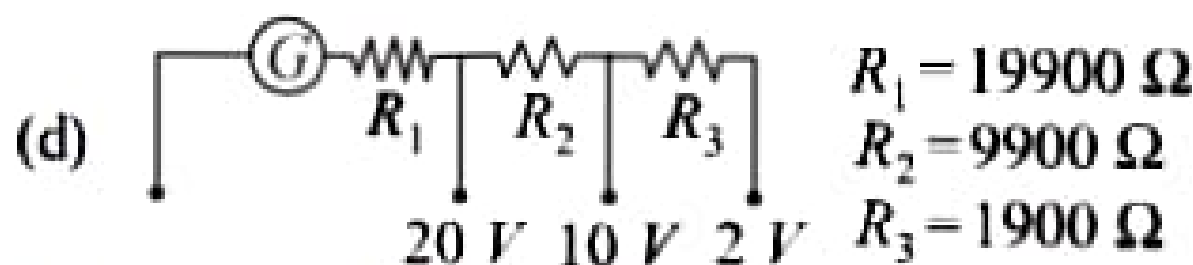
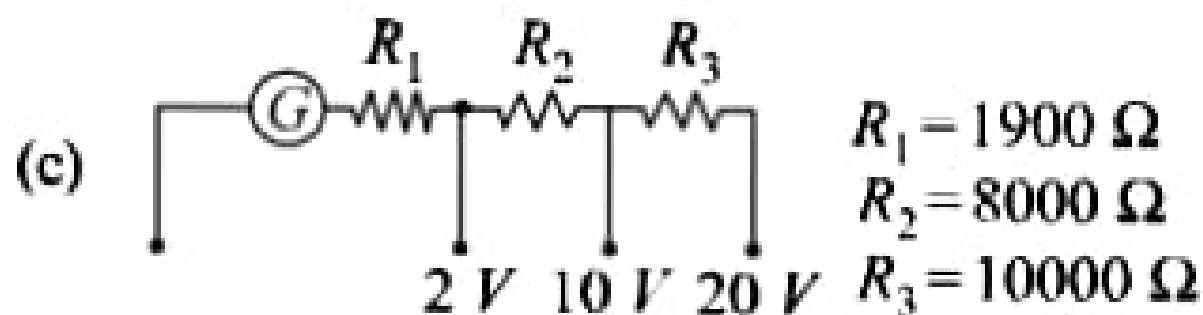
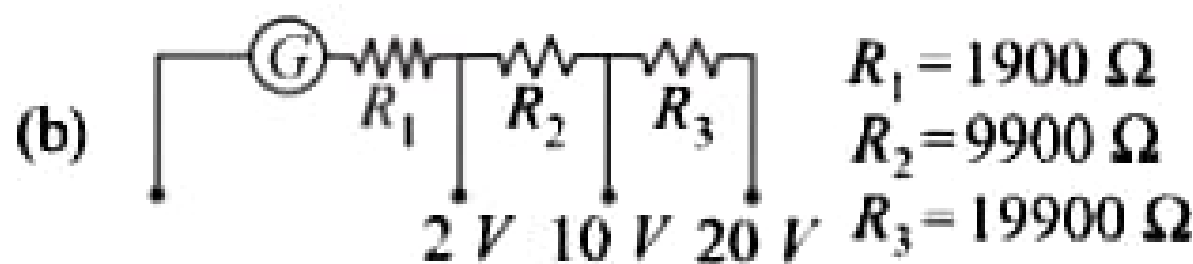
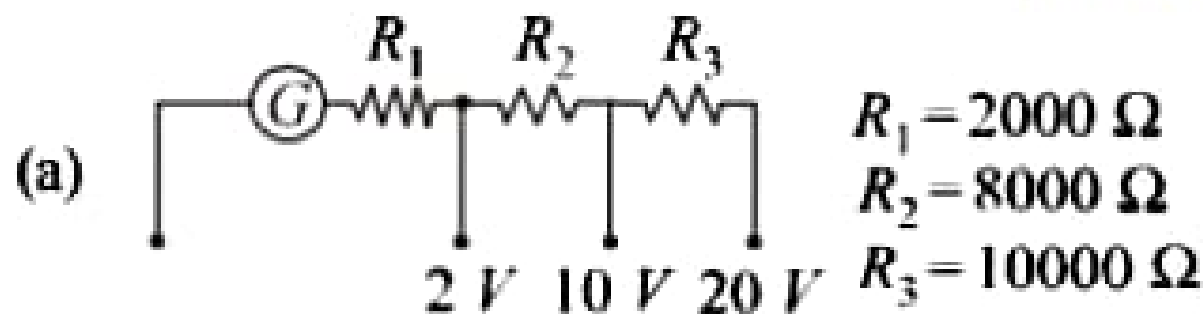


9. A galvanometer of resistance $100\ \Omega$ has 50 divisions on its scale and has sensitivity of $20\ \mu\text{A}/\text{division}$. It is to be converted to a voltmeter with three ranges, of $0\text{--}2\text{V}$, $0\text{--}10\text{V}$ and $0\text{--}20\text{V}$. The appropriate circuit to do so is :

[12 April 2019, I]



10. A moving coil galvanometer having a resistance G

$$(c) \quad i_g = 20 \times 50 = 1000 \mu A = 1 \text{ mA}$$

Using, $V = i_g (G + R)$, we have

$$2 = 10^{-3} (100 + R_1)$$

$$R_1 = 1900 \Omega$$

when, $V = 10$ volt

$$10 = 10^{-3} (100 + R_2 + R_1)$$

$$10000 = (100 + R_2 + 1900)$$

$$\therefore R_2 = 8000 \Omega$$