

Answer on Question #45215, Physics, Electric Circuits

To get maximum current in a resistance of 3Ω one can use n rows of m cells connected in parallel. If the total no. of cells is 24 and the internal resistance of a cell is 0.5Ω then (a) $m= 12, n= 2$ (b) $m= 8, n= 4$ (c) $m= 2, n= 12$ (d) $m= 6, n= 4$

Solution

Answer is (a) $m= 12, n= 2$. Indeed if we have 12 cells in a row, resistance of one row is 6Ω . Two such row in parallel connection will give us 3Ω resistance in total.