Answer on Question#40537, Physics, Electric Ciruits

A bulb of 100 W and 5 tubelights each of 40 W are used daily for 2 hour and 4 hour respectively. Calculate unit of electrical energy consumed in the month of June.

Solution:

The basic unit of electricity is the Kilowatt hour (kWh). In simple terms, 1 kWh is the amount of energy consumed by an electrical device) that is rated at 1kW (1000 watts) for 1 hour. A further example is ten 100-watt light bulbs used for 1 hour.

In our case: The consumption of electrical energy in the one day is $C_1 = 100 \cdot 2 + (40 \cdot 5) \cdot 4$ Wh = 200 + 800 Wh = 1000 Wh Number of days in June = 30. Thus, total energy consumed $C = C_1 \cdot 30 = 1000 \cdot 30 = 30000$ Wh = 30 kWh

Answer. 30 kWh.