THE UNIVERSITY OF LAHORE

Assignment No 2

LCA

Total Marks: 5

Section

Name

Objective:

Attach Assignment task along with paper

Box all the Answers and formulas

Start new Question from new sheet

Submission date : 10- Febuary-2016.

The Quiz has been designed to develop the understanding related to the followings,

- **Power**
- **Charge**
- **Current**
- **Graphs**
- **Power**
- **Energy**

GOOD LUCK

A lightning bolt carrying 30,000 A lasts for 50 micro-seconds. If the lightning strikes an airplane flying at 20,000 feet, what is the charge deposited on the plane?

If a 12-V battery delivers 100 J in 5 s, find (a) the amount of charge delivered and (b) the current produced.

The current in a conductor is 3.5 A. How many coulombs of charge pass any point in a time interval of 2.5 min?

If 90 C of charge pass through an electric conductor in 30 seconds, determine the current in the conductor.

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Determine the number of coulombs of charge produced by a 12-A battery charger in an hour.

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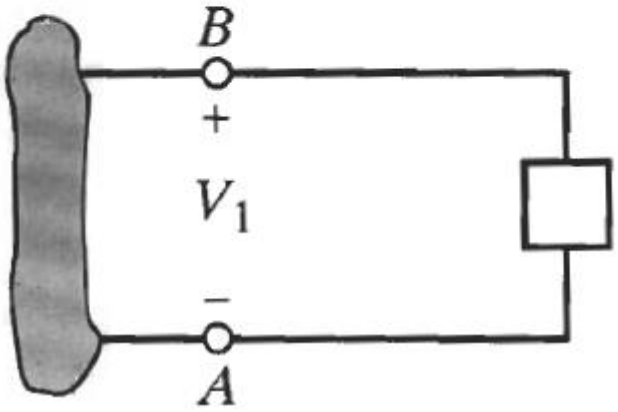
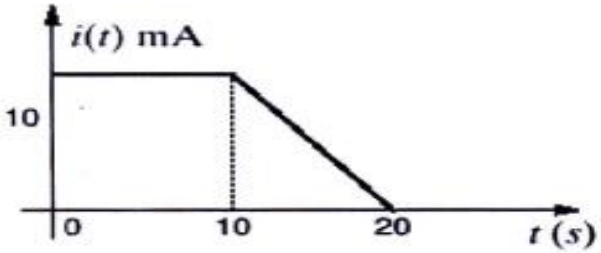
Five coulombs of charge pass through the element in Fig. P1.6 from point A to point B. If the energy absorbed by the element is 150 J, determine the voltage across the element.

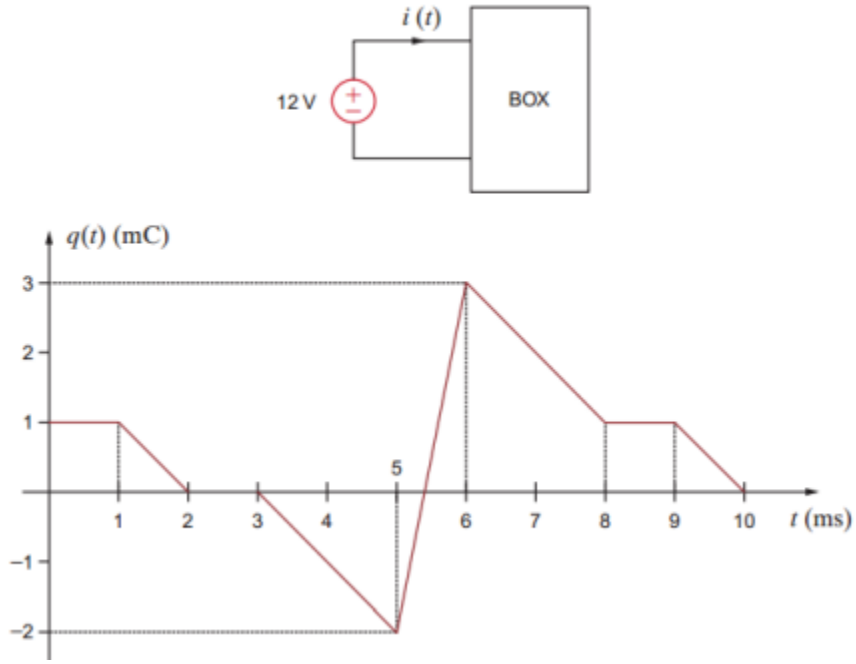


The current that enters an element is shown in Fig. P1.8. Find the charge that enters the element in the time interval $0 < t < 20$ s.

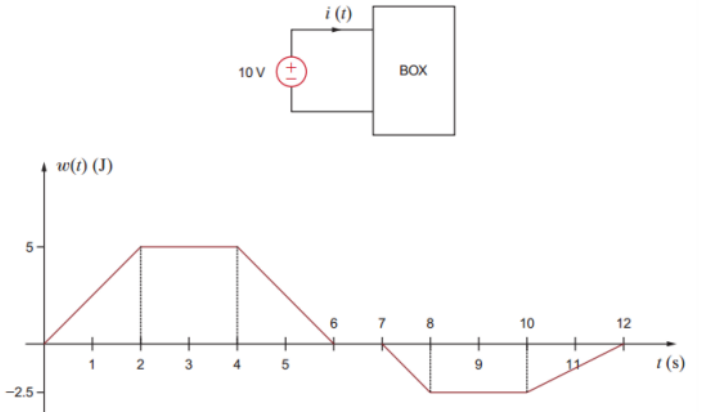


The voltage across an element is $12e^{-2t}$ V. The current entering the positive terminal of the element is $2e^{-2t}$ A. Find the energy absorbed by the element in 1.5 s starting from $t = 0$.

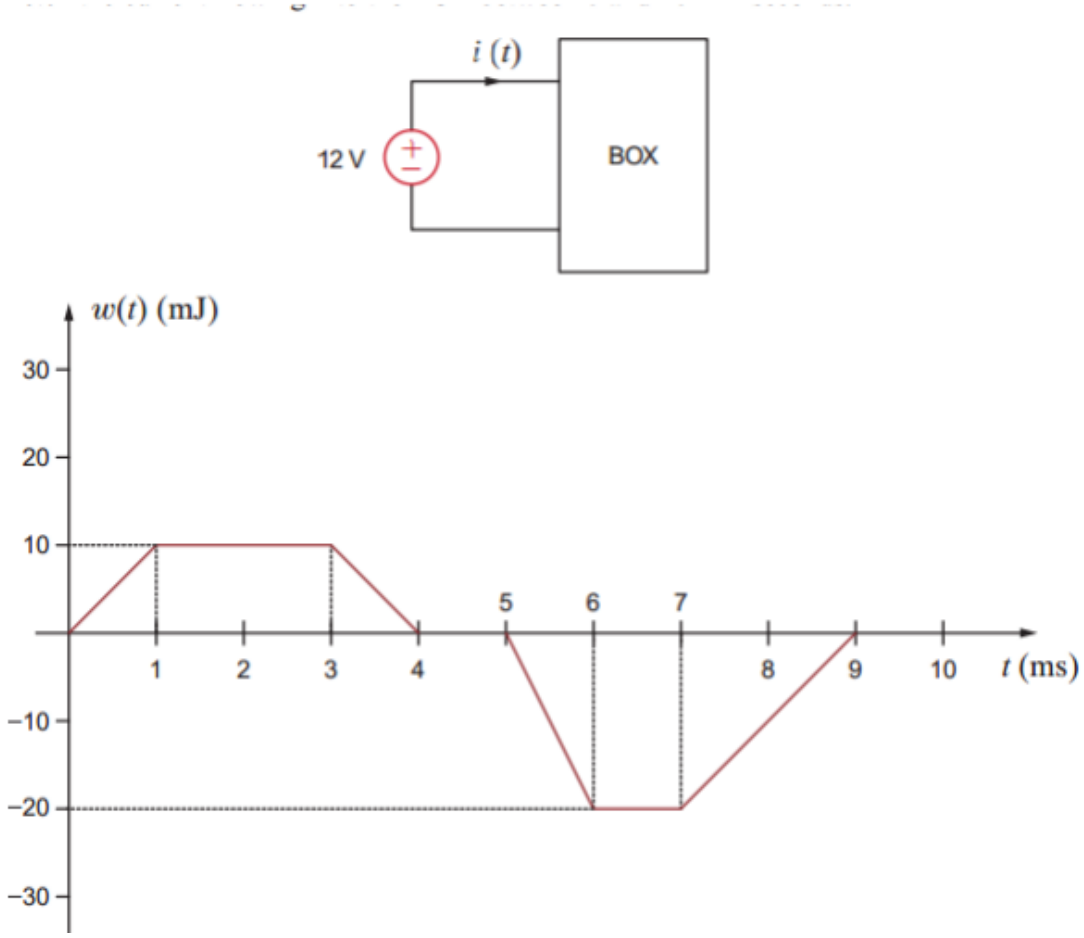
The charge that enters the BOX in Fig. P1.16 is shown in the graph below. Calculate and sketch the current flowing into and the power absorbed by the BOX between 0 and 10 milliseconds.



The energy absorbed by the BOX in Fig. P1.17 is given below. Calculate and sketch the current flowing into the BOX. Also calculate the charge which enters the BOX between 0 and 12 seconds

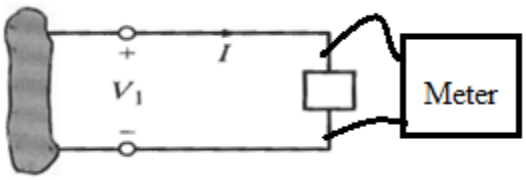

i (t)
10 V
BOX
w(t) (J)
5
−2.5
1
2
3
4
5
6
7
8
9
10
11
12
t (s)

. The energy absorbed by the BOX is shown in the graph below. Calculate and sketch the current flowing into the BOX between 0 and 10 milliseconds.

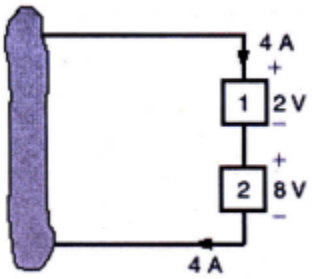


1.Mr. Sharez had made a power meter. He connects the meter to a circuit. Calculte what values will be displayed when

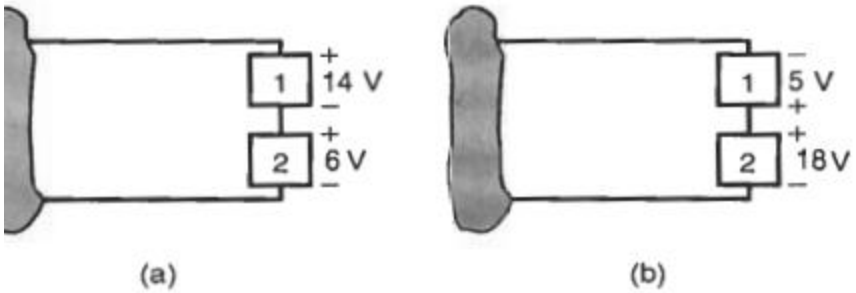
a) V1=5V and I=6A
b) V1=5 Vand I=-7A
c) V1=-14 and I=6A



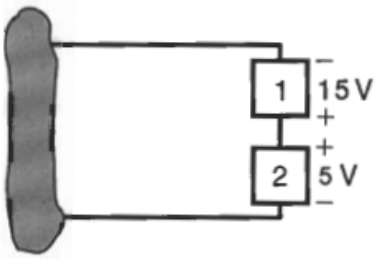
Determine the values of power for each element



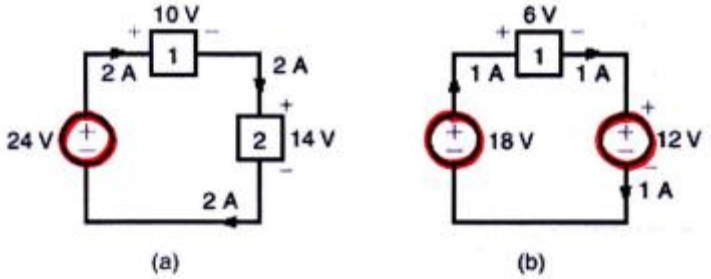
Mateen built two circuit , and supplied total power of 42 W to it. However he can not calculate that how much power is absored by element 2 and 1 in his project a and b . Can you please help him



Two Elements are connected in sereis . Element absorb 45 W power. Is element two absorbing power or supplying .



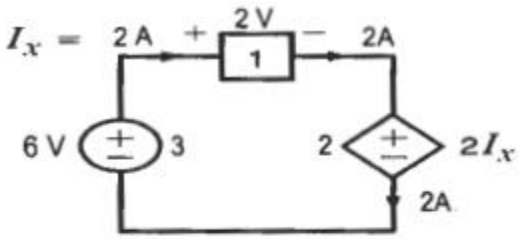
.Find the power that is absorbed or supplied by circuit element



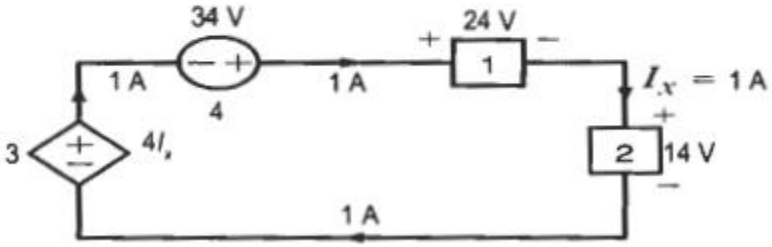
Find the power that is absorbed or supplied by circuit element

a) Power of element 1 at fig a
b) Power of element 2 at fig a

c) Power of element 3 at fig a
d) Power of element 1 at fig b
e) Power of element 2 at fig b

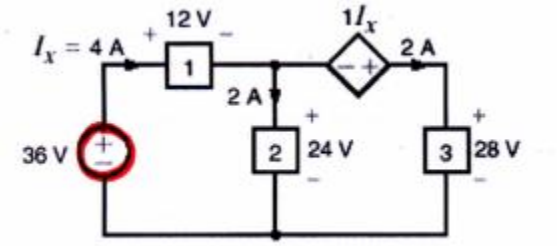


(a)

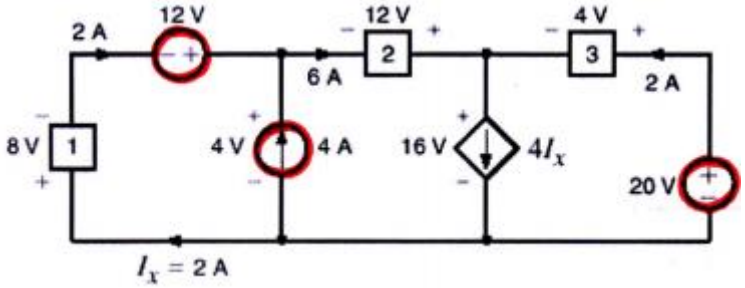


(b)

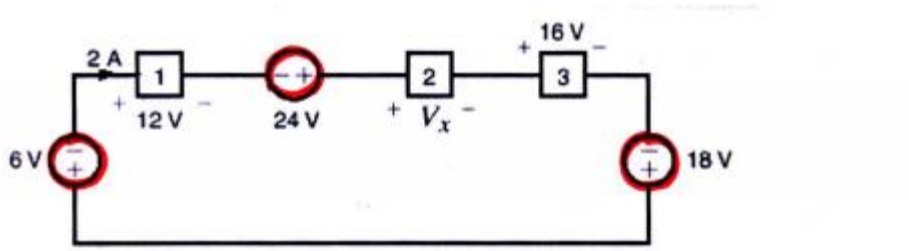
Find the power that is absorbed or supplied by circuit element



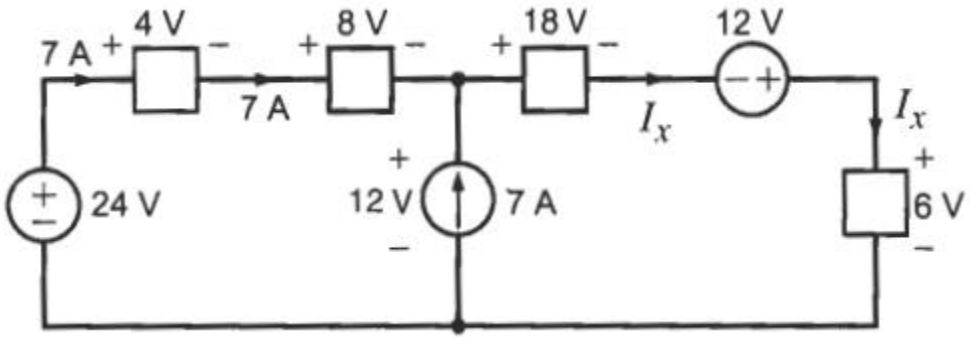
Find the power that is absorbed or supplied by circuit element in following diagram



Find Vx



Find Ix



Find Io