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اسئلة مقترحة:

فيزياء عامة عملية 2

للطالبة : لجين ايمن

اللجنة الأكاديمية لقسم الهندسة الصناعية

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Shown the figure 1 answer question 1,2,3

1. if the circuit is operating at maximum power ,then the voltage in volt s across R_L is
a) 2 b) 3 c) 4 d) 6
2. The maximum power dissipated in the load resistance in (mW) is
a) 50 b) 300 c) 133 d) 30
3. If R_2 is varied from 10 Ohm to 150 Ohm in steps of 10 Ohm ,then the maximum load current in (mA) is
a) 150 b) 0.10 c) 0.15 d) 1000

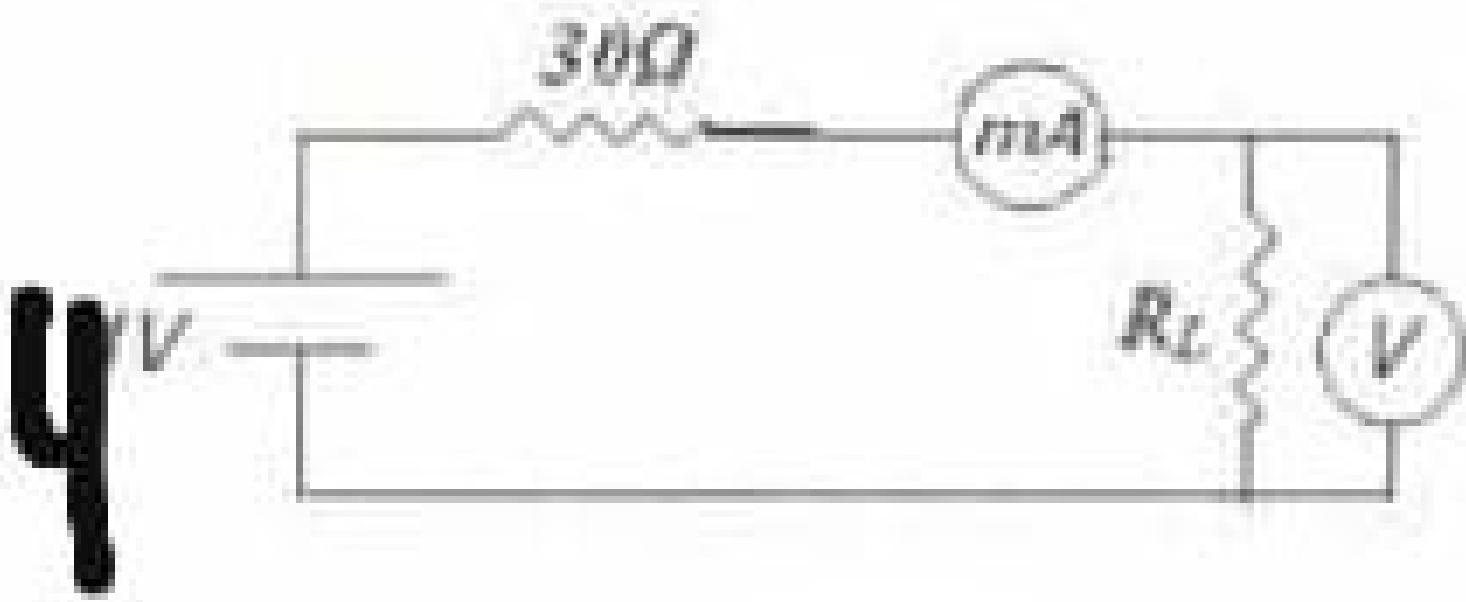


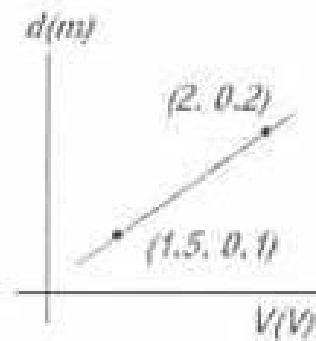
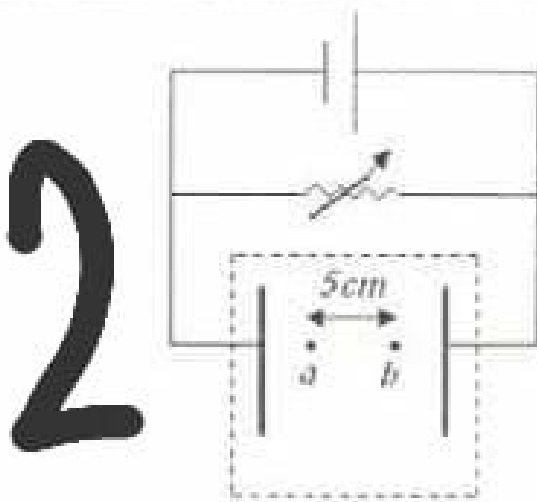
Fig 2 lshown the elecrodres configuration and fig3 shows the plotted V versus d . Depending on these figures answer Q1,2

1.1)he magnitude of electricfield in (V/m) is

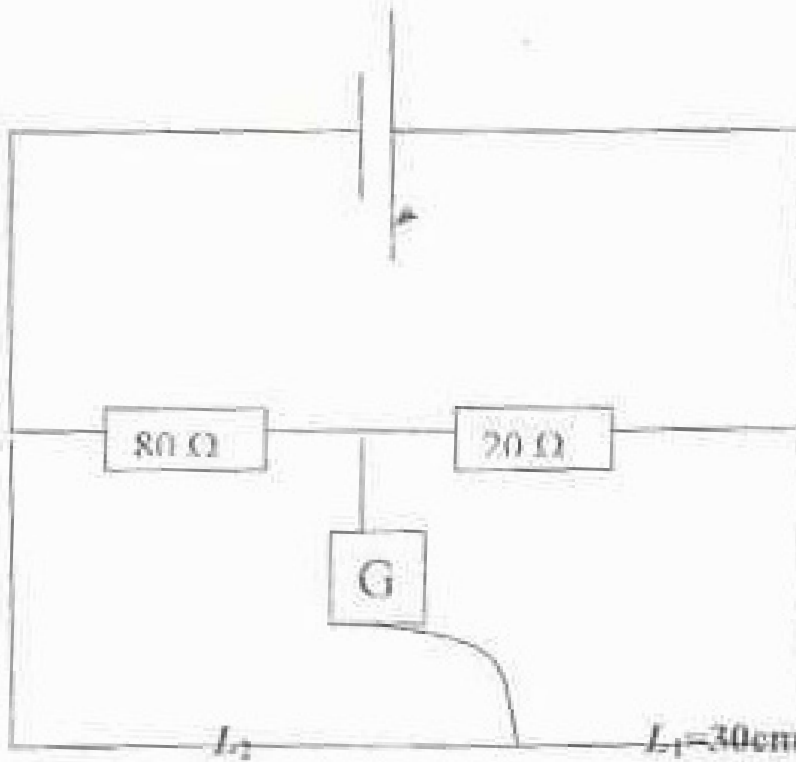
a) 15 b) 35 c) 0.20 d) 0.07

2.the value of V_{ab} (in Volts) is

a) 1.00 b) 0.35 c) 1.75 d) 0.75

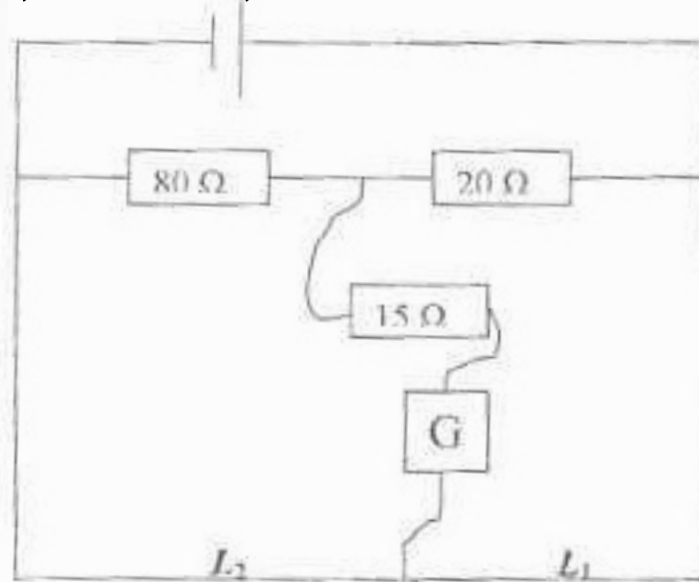


In whetstone bridge experiment if the circuit shown below is balanced for the values illustrated in the graph



The value of L_2 for the following modified circuit in cm is

a) 70 b) 120 c) 150 d) none of the bove



In the power transfer experiment , the following curve was obtained ,the value of the power supply voltage (in V) is

- a) 3 b) 2.83 c) 5.83 d) 5.66 e) 6

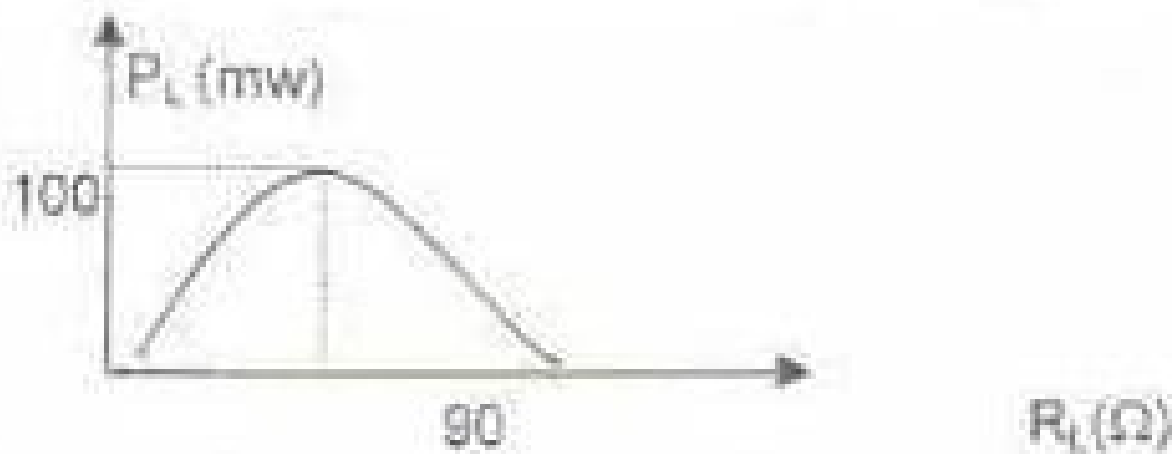


Table 1 has shown some measurements of specific charge experiment. Depending on this table, answer question 1 and 2

1) The value of specific charge (in C/kg) is

a) 1.8×10^3 b) 4.5×10^3 c) 7500 d) 3000

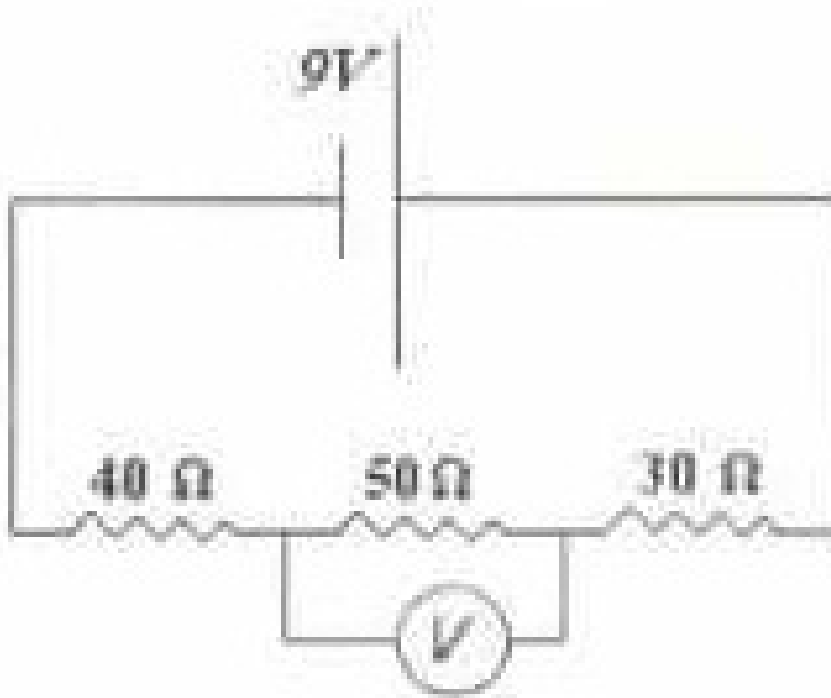
2) The value of unknown (x) in (mA) is

a) 0.6 b) 600 c) 0.5 d) 500

Current (A)	Time (min)	Deposited mass (g)
0.5	30	5
x	40	8

In the circuits shown in figure , the reading of the voltmeter (in Volts) is

- a) 2.25 b) 3 c) 3.75 d) 6



In the magnetic field of a current experiment , if the current in the loop is increased ,then the deflection angle will

- a) decrease b) increased c) unchanged
- d) depends on the direction of the current
- e) no enough information

Kirchhoff 2nd rule can be considered as an application of

- a) conservation of mass
- b) conservation of energy
- c) conservation of charge
- d) conservation of kinetic energy
- e) conservation of mechanical energy

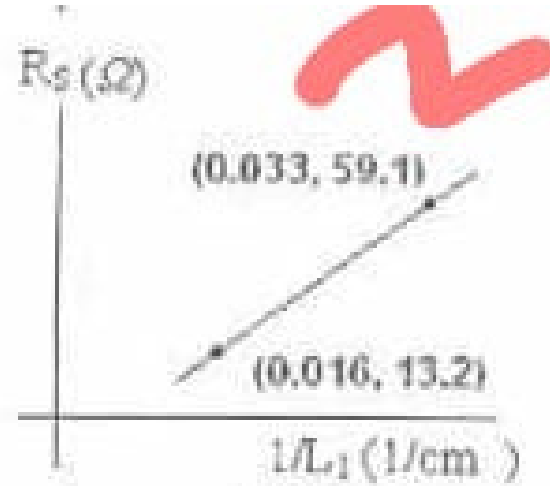
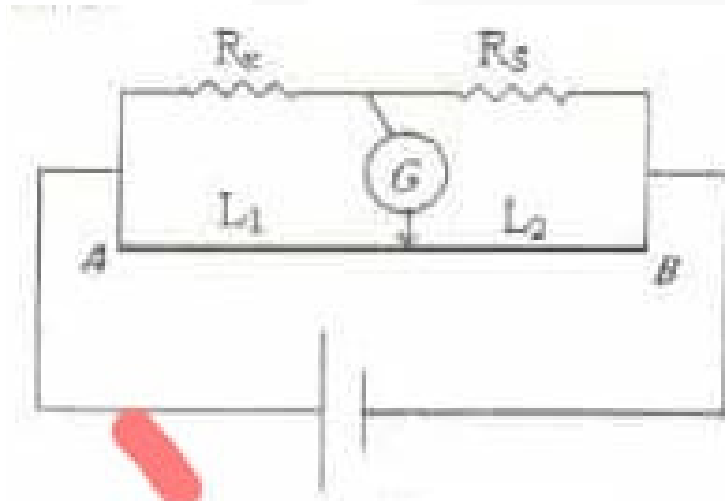
The following figure represents the charging process for three different capacitors connected to same voltage and same resistance ,using this figure can conclude that

- a) $C_1 > C_3 > C_2$ b) $C_3 > C_2 > C_1$ c) $C_1 = C > C_3$
d) $C_2 = C_3 > C_1$ e) $C_2 > C_3 > C_1$



For a balanced wheatstone bridge circuit shown in figure 1 if we plotted R_s versus $1/L_1$ as shown in figure 2, then the total length of the bridge (in cm) and the values of the unknown resistance R_x in (ohm), respectively are

- a) 90,30 b) 90,20 c) 100,20 d) 100,30

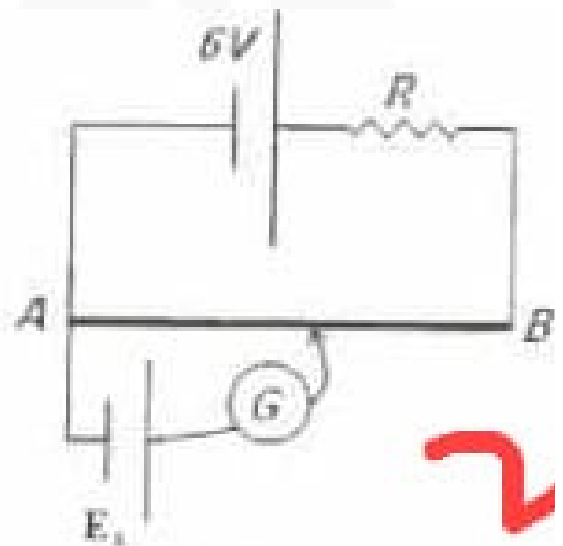
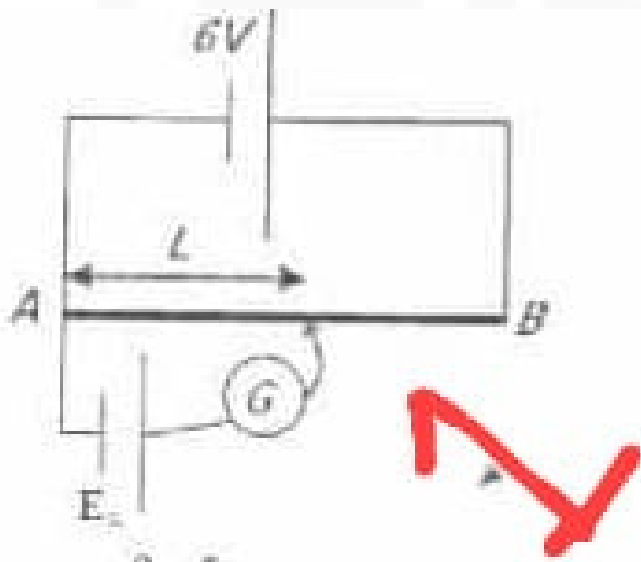


The greatest accuracy achieved , in the whealstone bridge experiment , when

- a) $L_1 > L_2$ B) $L_1 = 2L_2$
C) $L_1 < L_2$ D) $L_1 = L_2$

In the circuit shown in figure 1 AB is a uniform conducting wire of length l m and the resistance of the wire is 30 ohm. If the galvanometer reads zero when $L = 30$ cm, as shown in figure 1, then a variable resistance R is connected in series with the 6 battery, as shown in figure 2. The maximum value of R (in ohm) that can be used while the circuit still work as a potentiometer is :

- a) 9 b) 70 c) 21 d) 13



In the specific charge of copper ions experiment two measurements A & B gave the following data using the same solution concentration of CuSO_4

Experiment, using this results you can conclude :

- a) $m_A = m_B$ b) $m_A = 2m_B$ c) $2m_A = m_B$ d) $m_A = 4m_B$
e) $4m_A = m_B$

Experiment	$I(A)$	$t(s)$	Deposited mass
A	0.6	40	m_A
B	0.3	40	m_B

Figure one obtained the Ohms law experiment .

If $R_1 < R_2$ wich of the following statements is correct:

- a) A : R_1 & R_2 in parallel , B : R_2 . C : R_1 , D : R_1 & R_2 in series
- b) D : R_1 & R_2 in parallel , C : R_2 , B : R_1 , A : R_1 & R_2 in series
- c) A : R_1 & R_2 in parallel , C : R_2 , B : R_1 , D : R_1 & R_2 in series
- d) D : R_1 & R_2 in parallel , B : R_2 , C : R_1 . A : R_1 & R_2 in series

