

(a) make **one** suitable inference .

The \_\_\_\_\_ is depend on the \_\_\_\_\_  
temperature of liquid                      quantity of heat supply

(b) state **one** appropriate hypothesis  
quantity of heat supply    higher    temperature of liquid  
The higher the \_\_\_\_\_, the \_\_\_\_\_ the \_\_\_\_\_

(c)

(i) aim of the experiment                      temperature of liquid  
to determine the relationship between \_\_\_\_\_ and \_\_\_\_\_

(ii) variables in the experiment                      quantity of heat supply

MV \_\_\_\_\_ quantity of heat supply / power voltage

RV \_\_\_\_\_ temperature of liquid

CV \_\_\_\_\_ mass of liquid/ specific heat capacity of liquid

(iii) list of apparatus and materials                      **NO TYPE/ SIZE**  
(From list given and use to measure RV and MV with controlling the motion)

thermometer , immersion heater, power supply, (battery)  
weighing balance

(iv) arrangement of the apparatus  
(diagram with label)

(v) the procedures of the experiment

1. method of controlling the manipulated variable (**initial data**)

set up as shown, supply 4V of voltage as power voltage  
of heat energy to heat the water in the beaker

2. method of measuring the responding variable (use what and how to measure )

measure the increase of temperature of the water using  
thermometer to observe the corresponding of the increase  
of power voltage @= #1-#2

3. repeat with 4 difference value

repeat the experiment with different of power supply

of 6V, 8V, 10V and 12 V                      **(MUST HAVE 4 READING)**

(vi) the way of tabulate data

MV, symbol and unit	RV, symbol and unit
power voltage, V	temperature, @

(viii) analyse the data

symbol and unit

temperature,  $^{\circ}\text{C}$



power voltage, V



Symbol and unit



(a) make **one** suitable inference .  
depth of sinking of plasticine

The \_\_\_\_\_ is depend on the \_\_\_\_\_ mass of load \_\_\_\_\_

(b) state **one** appropriate hypothesis

The higher the \_\_\_\_\_ mass of load \_\_\_\_\_, the \_\_\_\_\_ higher \_\_\_\_\_ the \_\_\_\_\_ depth of sinking of plasticine \_\_\_\_\_

(c)

(i) aim of the experiment  
to determine the relationship between \_\_\_\_\_ depth of sinking of plasticine \_\_\_\_\_ and \_\_\_\_\_

(ii) variables in the experiment  
MV \_\_\_\_\_ mass of load \_\_\_\_\_

RV \_\_\_\_\_ depth of sinking of plasticine \_\_\_\_\_

CV \_\_\_\_\_ area cross of sectional \_\_\_\_\_

(iii) list of apparatus and materials  
(From list given and use to measure RV and MV with controlling the motion)

\_\_\_\_\_ weighing balance, meter rule, micrometer screw gauge, load, plasticine \_\_\_\_\_

(iv) arrangement of the apparatus  
(diagram with label)

(v) the procedures of the experiment

1. method of controlling the manipulated variable (**initial data**)

\_\_\_\_\_ measure the mass of load of 20g with weighing balance \_\_\_\_\_  
and place on the 10 cm<sup>2</sup> area of cross sectional of block.

2. method of measuring the responding variable (use what and how to measure )

\_\_\_\_\_ the sinking of plasticine after the load place on it is \_\_\_\_\_  
\_\_\_\_\_ measure using meter rule and the corresponding of  $I=I_1-I_0$  is determine \_\_\_\_\_

3. repeat with 4 difference value

\_\_\_\_\_ repeat the mass of load with different value of 30g, 40g, 50g and 60g \_\_\_\_\_

(vi) the way of tabulate data

MV, symbol and unit	RV, symbol and unit
mass, g	depth of sinking of plasticine, cm

(a) make **one** suitable inference .  
number of pins attracts

The \_\_\_\_\_ is depend on the \_\_\_\_\_ amount of current supply

(b) state **one** appropriate hypothesis

The higher the \_\_\_\_\_ amount of current \_\_\_\_\_, the \_\_\_\_\_ greater \_\_\_\_\_ the \_\_\_\_\_ number of pins attracts

(c)

(i) aim of the experiment  
to determine the relationship between \_\_\_\_\_ number of pins attracts \_\_\_\_\_ and \_\_\_\_\_ amount of current

(ii) variables in the experiment  
MV \_\_\_\_\_ amount of current

RV \_\_\_\_\_ number of pins attracts

CV \_\_\_\_\_ number of magnet bar (strength of magnet)

(iii) list of apparatus and materials  
(From list given and use to measure RV and MV with controlling the motion)

\_\_\_\_\_ ammeter, batteries, soft iron core, insulated copper wire, \_\_\_\_\_  
connecting wire,

(iv) arrangement of the apparatus  
(diagram with label)

(v) the procedures of the experiment

1. method of controlling the manipulated variable (**initial data**)

~~connect the iron core with battery and determine the current~~  
supply of 10 A

2. method of measuring the responding variable (use what and how to measure )

~~measure the corresponding of number of pins attracts after the switch is~~  
~~turns on due to the electromagnetic effects.~~

3. repeat with 4 difference value

\_\_\_\_\_ repeat with different current supply of 15 A, 20A, 25A and 30 A

(vi) the way of tabulate data

MV, symbol and unit	RV, symbol and unit
current, A	number of pins attracts

(a) make **one** suitable inference .  
resistance

The \_\_\_\_\_ is depend on the \_\_\_\_\_ length of wire

(b) state **one** appropriate hypothesis

The higher the \_\_\_\_\_ length of wire, the \_\_\_\_\_ higher \_\_\_\_\_ the \_\_\_\_\_ resistance of wire

(c)

(i) aim of the experiment \_\_\_\_\_ resistance of wire \_\_\_\_\_ length of wire  
to determine the relationship between \_\_\_\_\_ and \_\_\_\_\_

(ii) variables in the experiment  
MV \_\_\_\_\_ length of wire \_\_\_\_\_

RV \_\_\_\_\_ resistance of wire \_\_\_\_\_

CV \_\_\_\_\_ area cross sectional of wire \_\_\_\_\_

(iii) list of apparatus and materials  
(From list given and use to measure RV and MV with controlling the motion \_\_\_\_\_, switch  
micrometer screw gauge, ammeter, voltmeter, meter rule, constantan wire  
\_\_\_\_\_

(iv) power supply and rheostat  
arrangement of the apparatus  
(diagram with label)

(v) the procedures of the experiment

1. method of controlling the manipulated variable (**initial data**)  
measure the length of 5cm of constantan wire and connect to ammeter  
, voltmeter and power supply
2. method of measuring the responding variable (use what and how to  
measure )  
determine the resistance of wire,  $R=V/I$  using ammeter to measure current and  
voltmeter to measure  
potential difference
3. repeat with 4 difference value  
repeat the experiment with different length of wire of 10 cm, 15cm,  
20 cm and 25 cm

(vi) the way of tabulate data

MV, symbol and unit	RV, symbol and unit
length of wire, cm	resistance of wire, ohm ( $R=V/I$ )

(a) make **one** suitable inference .

The \_\_\_\_\_ is depend on the \_\_\_\_\_  
temperature of liquid                      mass of liquid

(b) state **one** appropriate hypothesis

quantity of mass of liquid higher                      temperature of liquid  
The higher the \_\_\_\_\_, the \_\_\_\_\_ the \_\_\_\_\_

(c)

(i) aim of the experiment                      temperature of liquid  
to determine the relationship between \_\_\_\_\_ and \_\_\_\_\_

(ii) variables in the experiment                      mass of liquid  
MV \_\_\_\_\_ mass of liquid                      / power voltage

RV \_\_\_\_\_  
                    temperature of liquid

CV \_\_\_\_\_ power voltage/ potential difference

(iii) list of apparatus and materials                      **NO TYPE/ SIZE**  
(From list given and use to measure RV and MV with controlling the motion)

thermometer , immersion heater, power supply, (battery)  
weighing balance

(iv) arrangement of the apparatus  
(diagram with label)

(v) the procedures of the experiment

1. method of controlling the manipulated variable (**initial data**)

set up as shown, supply 4V of voltage as power voltage  
of heat energy to heat the 20g of liquid in the beaker

2. method of measuring the responding variable (use what and how to measure )

measure the increase of temperature of the water using  
thermometer to observe the corresponding of the increase  
of power voltage @= #1-#2

3. repeat with 4 difference value

repeat the experiment with different of mass of liquid

of 30g, 40g, 50g and 60 g                      **(MUST HAVE 4 READING)**

(vi) the way of tabulate data

MV, symbol and unit	RV, symbol and unit
mass of liquid, g	temperature, @

(viii) analyse the data

symbol and unit

temperature, °C



mass of liquid ,g

Symbol and unit

