

Structure {Paper03}

[MRS11-02]

(a)

Sodium chloride solution : 2.6 V	Ethanol : 0.0 V
Glucose solution : 0.0 V	Lead(II) nitrate solution : 3.6 V

(b)

Electrolytes	non-electrolytes
Sodium chloride solution	Ethanol
Lead(II) nitrate solution	Glucose solution

(c) (i) Decreases

(ii) Because the concentration of sodium chloride is decreases

[SBP11-01]

(a)

Experiment	Observation at anode
I	Bubbles of gas released // effervescence occurs
II	Copper / anode becomes thinner / dissolved / smaller.

(b) Copper (II) ion / Cu^{2+} produced // Copper ionises // Copper released electron // Copper is oxidised.

(c) When copper electrodes are used instead of carbon electrodes, the types of products formed at the electrodes are different // Different electrode/anode produces different products.

(d) (i) the manipulated variable : Type of electrode/anode // copper and carbon

(ii) the responding variable : Product at the anode // Product of electrolysis

(iii) the constant variable : Copper(II) sulphate // CuSO_4 // Electrolyte // Concentration of electrolyte(e) Chlorine gas/ Cl_2 **[MRS106-01-P3]**

(a)

Cell	Observation at the anode	Inference
I	Bubbles gas released and colourless gas at top of test tube	OH^- was selected and gas oxygen is formed
II	Bubbles gas released and yellowish green gas at top of test tube	Chloride ions. Cl^- was selected and gas chlorine, Cl_2 is formed

(b) Manipulated variable : Concentration of Copper(II) chloride solution

Responding variable : products at anode

Controlled variable : copper(II) chloride solution

(c) Different concentration of Copper(II) chloride used in the experiment, different products formed at anode

(d) Bubbles gas released and colourless gas produced

[sebabnya ion Cl⁻ telah habis ditukarkan kpd Cl₂. Ion yang tinggal adalah OH⁻]

[MRSMtrial05-02-P3]

(a) Manipulated variable : Concentration of hydrochloric acid solution

Responding variable : products at anode

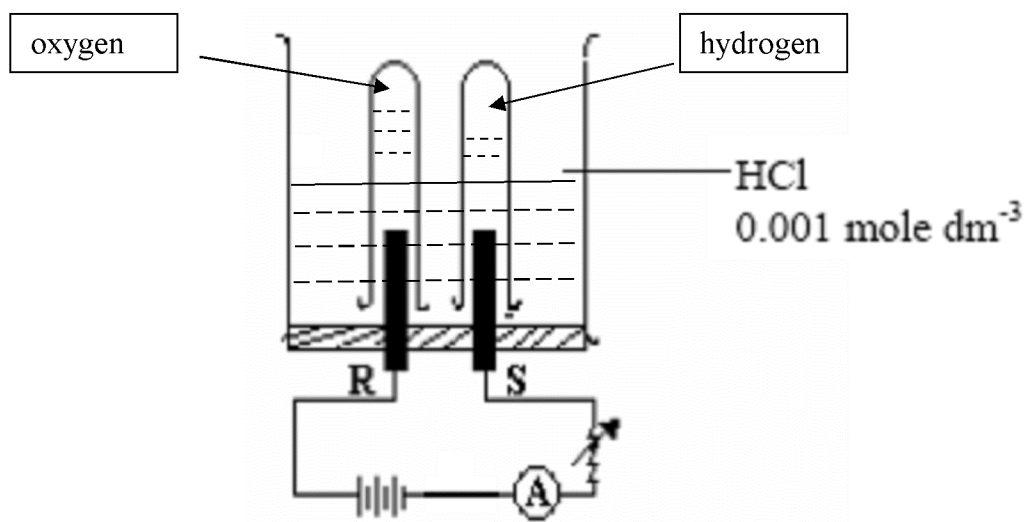
Controlled variable : hydrochloric acid solution

(b) Different concentration of hydrochloric acid used in the experiment, different products formed at anode

(c)

Experiments	Ions attracted	
	anode	cathode
0.1 mol dm ⁻³	Cl ⁻ and OH ⁻	H ⁺
1.0 mol dm ⁻³	Cl ⁻ and OH ⁻	H ⁺

(d)



(e) Experiment I:

Electrode	Half ionic equation
P	$2\text{Cl}^- \rightarrow \text{Cl}_2 + 2\text{e}^-$
Q	$2\text{H}^+ + 2\text{e}^- \rightarrow \text{H}_2$

Experiment II:

Electrode	Half ionic equation
R	$4\text{OH}^- \rightarrow 2\text{H}_2\text{O} + \text{O}_2 + 4\text{e}^-$
S	$2\text{H}^+ + 2\text{e}^- \rightarrow \text{H}_2$

(f) Different concentration of hydrochloric acid used in the experiment, different products formed at anode

(g) 1. Bubbles gas released in test tube P and Q
2. the ratio volume the gas in the test tube Q is 2 times/doubles than tube P

(h) Chlorine gas displace the iodide ions to formed potassium chloride and iodine. Formed of iodine substance that shows brown colour

[SBPtrial04-02-P3] {Translate}

(a)

Penerangan	Skor
[Dapat mencatatkan 4 bacaan dengan tepat] Cadangan jawapan: J/Cu 1.1, K/Cu 2.2, L/Cu 0.7, M/Cu 0.3	3
Dapat mencatat mana-mana 3 bacaan dengan tepat	2
Dapat mencatat mana-mana 2 bacaan dengan tepat	1
Tidak memberikan respons atau respons salah	0

(b)

Penerangan	Skor
[Dapat menyatakan pemboleh ubah dimanipulasi, pemboleh ubah bergerak balas dan pemboleh ubah yang dimalarkan dengan lengkap] Cadangan jawapan: Pemboleh ubah dimanipulasikan : pasangan elektrod/ logam// logam yang berpasangan dengan kuprum Pemboleh ubah bergerak balas : Nilai voltan // bacaan voltmeter Pemboleh ubah yang dimalarkan: larutan kuprum(II)sulfat/ elektrolit, elektrod kuprum	3
[Dapat menyatakan mana-mana dua pemboleh ubah dengan lengkap// mana-mana 3 pemboleh ubah yang tidak lengkap]	2
[Dapat menyatakan mana-mana satu pemboleh ubah dengan lengkap atau idea bagi mana-mana dua pemboleh ubah] Contoh jawapan: Pemboleh ubah dimanipulasikan : jenis logam Pemboleh ubah bergerak balas : volt Pemboleh ubah yang dimalarkan:larutan	1
Tidak memberikan respons atau respons salah	0

(c)(i)

Penerangan	Skor
[Dapat menyatakan mana-mana 3 pemerhatian dengan betul] Cadangan jawapan <ul style="list-style-type: none"> • Jarum voltmeter terpesong • Keamatan warna biru larutan berkurang • Logam K menipis/melarut • Kepingan kuprum menebal//enapan perang terbentuk di kepingan kuprum 	3

[Dapat menyatakan mana-mana 2 pemerhatian dengan betul]	2
[Dapat menyatakan sekurang-kurangnya 1 pemerhatian yang betul]	1
Tidak memberikan respons atau respons salah	0

(c)(ii)

Penerangan	Skor
[Dapat meramal bacaan voltmeter yang kurang daripada 2.2] Cadangan jawapan: <ul style="list-style-type: none"> Bacaan voltmeter kurang daripada 2.2 Satu nilai Voltan : < 2.2V 	3
[Dapat meramal bacaan voltmeter berkurang tanpa nilai asal] Cadangan jawapan: <ul style="list-style-type: none"> Bacaan voltmeter berkurang 	2
[Dapat menunjukkan idea meramal bacaan voltmeter tetapi memberikan bacaan ≥ 2.2 V]	1
Tidak memberikan respons atau respons salah	0

(d)

Penerangan	Skor
[Dapat menyatakan inferens yang tepat bagi pemerhatiannya] Cadangan jawapan <ul style="list-style-type: none"> Lebih jauh kedudukan pasangan logam dalam siri elektrokimia, lebih besar voltan sel yang terhasil 	3
[Dapat menyatakan inferens tetapi kurang tepat bagi pemerhatiannya] Cadangan jawapan <ul style="list-style-type: none"> Voltan sel yang terhasil bergantung pada kedudukan pasangan logam dalam siri elektrokimia 	2
[Dapat menyatakan idea tentang inferens bagi pemerhatian] Contoh jawapan <ul style="list-style-type: none"> Voltan terhasil apabila dua logam berlainan digunakan dalam sel kimia. 	1
Tidak memberikan respons atau respons salah	0

(e)

Penerangan	Skor
[Dapat menyusunkan kelima-lima logam mengikut tertib keelektropositifan menurun yang betul] Cadangan jawapan <ul style="list-style-type: none"> $K > J > L > M > Cu$ 	3
[Dapat menyusunkan 4 logam mengikut tertib keelektropositifan menurun yang betul]	2
[Dapat menunjukkan idea menyusunkan kelima-lima logam dalam satu urutan]	1
Tidak memberikan respons atau respons salah	0

2 (f)

Penerangan	Skor
[Dapat membuat pengelasan dengan betul] Cadangan jawapan Lebih elektropositif; K, J Kurang elektropositif; M, Cu	3
[Dapat membuat pengelasan mana-mana dua logam dengan betul]	2
[Dapat membuat pengelasan mana-mana satu logam dengan betul atau pengelasan terbalik]	1
Tidak memberikan respons atau respons salah	0

[SBPmidyearF508-02-P3]

(a) KK0506 Communicating

EXPLANATION	Score
[Able to write the correct overall ionic equation] Suggested answer: $Mg + Cu^{2+} \rightarrow Mg^{2+} + Cu$	3
$Mg + CuSO_4 \rightarrow MgSO_4 + Cu$	2
$Mg \rightarrow Mg^{2+} + 2e$ // $Cu^{2+} + 2e \rightarrow Cu$	1
No response given / wrong response	0

2(a)(i) KK 0504 – Making inference

EXPLANATION	Score
[Able to state the correct inference] Suggested answer: Magnesium atom releases/donate/loses electrons to produce magnesium ion // Magnesium is corrode.	3
Magnesium becomes thinner // mass of magnesium decreases	2
Magnesium dissolves	1
No response given / wrong response	0

2(b) KK 0505 – Predicting

EXPLANATION	Score
[Able to state the voltage value] 0.65 V	3
0.63 – 0.64 V // 0.66 – 0.67 V	2
< 0.64 V // > 0.67 V	1
No response given / wrong response	0

2(c)KK 0508 – Interpreting Data

EXPLANATION	Score
[Able to arrange the position of all metals in an ascending order based on tendency to release electrons correctly] Copper > Lead > Iron > Zinc > Magnesium	3
[Able to arrange the position of all metals in descending order based on tendency to release electrons] Magnesium > Zinc > Iron > Lead > copper	2
[Able to arrange the position of at least four metals in ascending order based on tendency to release electrons correctly]	1
No response given / wrong response	0

2(d) KK0509 – Operational definition

EXPLANATION	Score
[Able to state the correct and complete operational definition] Suggested answer: The further the metal is from copper in the electrochemical series, the greater is their voltage reading. //	3
[Able to give incomplete relationship] Suggested answer: The further apart the metal is in the electrochemical series, the greater the potential difference / voltage reading.	2
[Able to state an idea] Suggested answer: The position of metal influence the voltage reading // Type of metal influence the voltage reading.	1
No response given / wrong response	0

[SBPdiag07-02-P3]

(a) KK0505 – Predicting

EXPLANATION	Score
(Able to give correct answer and unit) Suggested answer 2.27 V	3
(Able to give correct answer without unit) Suggested answer : 2.27	2
(Round off to one decimal place) Suggested answer : 2.2 V // 2.3 V	1
No response or wrong response	0

(b) KK06 – Communicating

EXPLANATION	Score
(Able to write overall equation correctly) Suggested answer : $\text{Zn} + \text{Cu}^{2+} \rightarrow \text{Cu} + \text{Zn}^{2+}$	3
(Able to write overall equation but incorrectly) Suggested answer : $\text{Zn} + \text{Cu}^{+2} \rightarrow \text{Cu} + \text{Zn}^{+2}$	2
(Able to give an idea to write overall equation) Suggested answer : $\text{Cu} + \text{Zn}^{2+} \rightarrow \text{Zn} + \text{Cu}^{2+}$	1
No response or wrong response	0

(c) KK07 – Using Space Time-Relationship

EXPLANATION	Score
(Able to give the answer correctly) Suggested answer : The mass will decrease	3
(Able to give the answer but incorrectly) Suggested answer : Zinc electrode becomes thinner//dissolves in the solution	2
(Able to give an idea) Suggested answer : Zinc electrode corrodes	1
No response or wrong response	0

(d) KK08 – Interpreting data

EXPLANATION	Score
(Able to arrange the five metal in ascending order) Suggested answer :// symbol Copper, lead, iron, zinc, magnesium // Cu, Pb, Fe, Zn, Mg	3
(Able to arrange at least three metal in ascending order) Suggested answer : Zinc, Magnesium, Copper, lead, iron, // Zn, Mg, Cu, Pb, Fe,	2
(Able to arrange the five metal but in descending order) Suggested answer : Magnesium, zinc, iron, lead and copper // Mg, Zn, Fe, Pb, Cu	1
No response or wrong response	0

(e) KK0502 –Classifying

EXPLANATION	Score
(Able to classify all ions into positive ions and negative ions correctly) Suggested answer : Positive ions: Cu^{2+} , H^+ Negative ions: SO_4^{2-} , OH^-	3
(Able to classify one positive ion and one negative ion for copper(II) sulphate. Suggested answer : Positive ions: Cu^{2+} Negative ions: SO_4^{2-}	2
(Able to give any one ion correctly) Suggested answer : Positive ions: Cu^{2+} / H^+ or Negative ions: SO_4^{2-} / OH^-	1
No response or wrong response	0

(f) KK11 – Making hypothesis

EXPLANATION	Score
(Able to give complete answer correctly) Suggested answer : The further the distance between the metals at the negative electrode, the bigger the voltage reading	3
(Able to give incomplete answer) Suggested answer : The further the distance between the metals, the bigger the voltage reading	2
(Able to give an idea) Suggested answer : Different pair of metals, have different voltage reading	1
No response or wrong response	0

[MRSMTrial09-01-P3]

(a)

Pairs of metal	Potential difference/ (V)
Cu and M	1.1 V
Cu and J	1.8 V
Cu and Q	0.4 V

(b) J, M, Q

(c)

More electropositive metals than iron	Less electropositive metals than iron
J and M	Cu

(d) (i) 1. blue CuSO_4 turns to pale blue (drpd diagram)

2. Metal J became thinner

3. Copper became thicker

(ii) Part of Metal J that immerse in the solution will be already gone because its change to ions of J

[MRSMTrial08-01-P3]

(a)

Mg/Cu 2.8 V	Fe/Cu 0.8 V
Zn/CU 1.2 V	Pb/Cu 0.4 V

(b)

Experiment	Positive terminal	Potential Difference/V
Mg/Cu	Cu	2.8
Fe/Cu	Cu	0.8
Zn/Cu	Cu	1.2
Pb/Cu	Cu	0.4

(c)

The way to manipulate variable :	Change the metal that pair with copper in the experiment that was repeated
What to observe in the responding variable:	Measure the Potential Difference // voltmeter reading
The way to maintain the controlled variable:	Used Copper metal as positive terminal in all the experiment

(d) The further distance between two metals in the Electrochemical Series, the higher the potential different produce

(e)

Observations	Inferences
1) Copper metal became thicker	1) Cu^{2+} ion receive 2 electrons and formed copper metal, that attach at copper metal
2) Blue CuSO_4 turns to colourless	2) Cu^{2+} ion in the solution was discharged into copper metal
3) Magnesium became thinner	3) Mg dissolve and produce Mg^{2+} ions

(f) Mg, Zn, Fe, Pb, Cu

(g)

Cations	Anions
Cu^{2+} , Mg^{2+} and H^+	SO_4^{2-} and OH^-

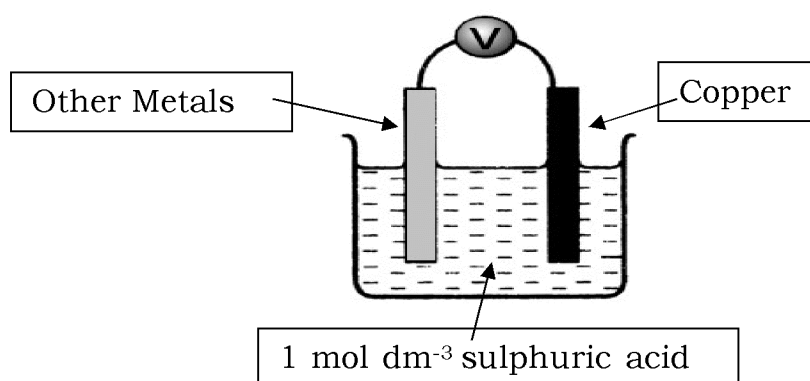
(i) Between Mg and Zn

(h) When Magnesium metal dipped into Magnesium Sulphate solution connect to voltmeter at terminal negative and copper metal dipped into Copper(II) sulphate solution connect to positive terminal, the voltage reading is 2.8 V, the higher potential different.

(j) Blue CuSO_4 change to colourless

[MRSMTrial03-01-P3]

(a)



(b) The further distance between two metals in the Electrochemical Series, the higher the potential difference produced

(c) Manipulated variable: pair of metals // metal pair with Copper

Responding variable : voltage produced // potential difference

Constant variable : sulphuric acid solution

(d) $1.10 + 0.45 = 1.55 \text{ V}$

(e) Al, Zn, Fe, Cu, Ag

[SPM09-01-P3]

a.

Observation	Inference
1) Cell I, carbon used as the electrodes. Cell II, copper used as the electrodes	1) the type of electrode that is used affects the product of electrolysis
2) The concentration of copper(II) sulphate decreases in Cell 1 but remains constant in Cell II.	2) In Cell I, the copper deposited is from the CuSO_4 . In Cell II, the copper deposited is from the anode dissolves.
3)	3)

(b) The different electrode used in the electrolytic cell, the different products produced

(c) (i) The manipulated variable : The type of electrode

(ii) The responding variable : products formed

(iii) The constant variable : Concentration of CuSO_4

(d)

Solution that produces gas at the anode when electrolysed	Solution that does not produce gas at the anode when electrolysed
Sodium hydroxide and nitric acid	Potassium iodide

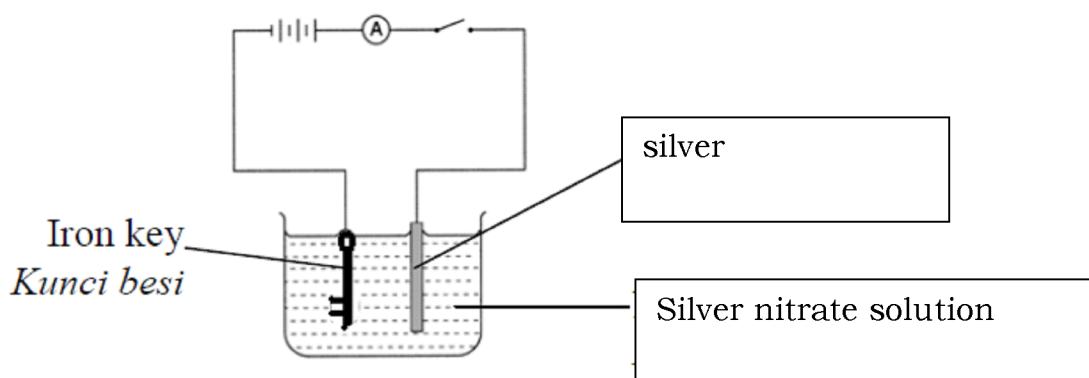
(e) **Cell I :**

The blue colour is due to presence of Cu^{2+} ions in the solution. Copper(II) ions from the solution are discharged to form copper at the cathode. The concentration of Cu^{2+} ions decreases. Thus, the solution changes from dark blue to light blue.

Cell II :

the copper deposited at the cathode is from the dissolving anode. The concentration of the copper ions in the solution remains the same. Thus, there is no change in the colour of the solution.

(f)(i)



(ii) The key is coated with silver layer

[SPM2005-02-P3]

(a) the intensity of the blue colour of copper(II) sulphate becomes pale blue/colourless

(b)

Manipulated variable : Type of metal as negative terminal	Method to manipulated the variable : Repeat experiment by used another metals as negative terminal
Responding variable : The voltage produce	How the variable is responding : measure and record the voltmeter reading
Controlled variable : Copper metal copper(II) sulphate solution	Method to maintain the controlled variable: maintain/ used copper metal as positive terminal//used CuSO_4 as electrolyte

(c) The further distance between two metals in the Electrochemical Series, the higher the potential different produce

[SBPTrial07-02-P3]**(a)**

Rubric	Score
<p>[Able to give the hypothesis accurately]</p> <p>Suggested answer : The further the metal is from copper in the electrochemical series, the greater is their potential different/ voltage reading. // The further apart the metal is in the electrochemical series, the greater the potential different/ voltage reading.</p>	3
<p>[Able to give the hypothesis almost accurately]</p> <p>Suggested answer : The further the metal is from copper in the reactivities series, the greater is their potential different/ voltage reading. // The further apart the metal is in the reactivities series, the greater the potential different/ voltage reading.</p>	2
<p>[Able to state an idea of hypothesis]</p> <p>Suggested answer : The position of metal influence the different potential/ voltage reading. Type of metal influence the different potential/ voltage reading.</p>	1
No response or wrong response	0

(b)

Rubric	Score
<p>[Able to arrange all the 5 metals according to descending order of electropositivity correctly]</p> <p>Suggested answer: Magnesium, Aluminium, Zinc, Iron, Copper [a: formula]</p>	3
<p>[Able to arrange all the 4 metals but according to increasing order of electropositivity correctly]</p> <p>Example: <u>Mg, Al, Fe, Cu, Zn</u> // <u>Al, Zn, Fe, Cu, Mg</u> // <u>Al, Zn, Mg, Fe, Cu</u></p>	2
<p>[Able to arrange all the 5 metals but according to ascending order of electropositivity correctly]</p> <p>Example ; Cu, Fe, Zn, Al, Mg</p>	1
No response or wrong response	0

(c)

Rubric	Score
[Able to state inference correctly]. Suggested answer <ul style="list-style-type: none"> Electrical energy is not produced No movement of electron because the same type of metal are used as electrodes in a voltaic cell 	3
[Able to state inference not completely]. Suggested answer Electrical energy is not produced // no movement of electron because the same type of metal are used as electrodes in a voltaic cell	2
[Able to state an idea] Example No electric/electron/potential difference	1
No response or wrong response	0

(d)

Rubric	Score
[Able to state three observations correctly] Suggested answer: 1 Zinc dissolved // becomes thinner 2 Copper becomes thicker // brown solid deposited 3 Blue solution becomes light blue /fading in colour	3
[Able to state two observation correctly]	2
[Able to state one observation/idea about observation of the cell]	1
No response given or wrong response	0

(e)

Rubric	Score
[Able to predict correctly] Answer: 1.0 V	3
[Able to predict almost correctly] Example: 1.0	2
[Able to state an idea to arrange the metals] Example: Reading is higher than 0.5 / lower than 1.5	1
No response or wrong response	0

[SBPtrial09-01-P3]

a.

Rubric	Score
Able to state all the voltmeter readings accurately with correct unit <u>Sample answer:</u> M and Cu : 2.80 V N and Cu : 0.80 V O and Cu : 1.40 V P and Cu : 0.40 V	3
Able to state all the voltmeter readings accurately without unit//correct reading with unit. <u>Sample answer:</u> M and Cu : 2.80 / 2.8 V N and Cu : 0.80 / 0.8 V O and Cu : 1.40 / 1.4 V P and Cu : 0.40 / 0.4 V	2
Able to state at least two readings correctly without unit	1
No response or wrong response	0

b.

Rubric	Score										
Able to construct a table to record the voltmeter reading for each pair of metals that contain: <ol style="list-style-type: none"> 1. Correct titles 2. Readings <u>Sample answer:</u> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Pairs of metals</th> <th>Voltage / V</th> </tr> </thead> <tbody> <tr> <td>M and Cu</td> <td>2.80</td> </tr> <tr> <td>N and Cu</td> <td>0.80</td> </tr> <tr> <td>O and Cu</td> <td>1.40</td> </tr> <tr> <td>P and Cu</td> <td>0.40</td> </tr> </tbody> </table>	Pairs of metals	Voltage / V	M and Cu	2.80	N and Cu	0.80	O and Cu	1.40	P and Cu	0.40	3
Pairs of metals	Voltage / V										
M and Cu	2.80										
N and Cu	0.80										
O and Cu	1.40										
P and Cu	0.40										
Able to construct a less accurate table that contains: <ol style="list-style-type: none"> 1. Titles 2. Readings 	2										
Able to construct a table with at least one title / reading	1										
No response or wrong response	0										

c.

Rubric	Score
Able to state the relationship between the manipulated variable and the responding variable with direction. <u>Sample answer:</u> The further the distance between two metals in the Electrochemical Series the bigger the voltage value.	3
Able to state the relationship between the manipulated variable and responding variable. <u>Sample answer:</u> Different pair of metals have different voltage value	2
Able to state the idea of hypothesis <u>Sample answer:</u> Pair of different metals shows voltmeter reading	1
No response or wrong response	0

d.

Rubric	Score
Able to state all the correct observations <u>Sample answers:</u> (i) At negative terminal: electrode becomes thinner (ii) At positive terminal: electrode becomes thicker (iii) At copper(II) sulphate solution: intensity of blue solution decreases//blue solution turns pale blue	3
Able to state any two correct observations	2
Able to state any one correct observation	1
No response or wrong response	0

e.

Rubric	Score
Able to give both explanation correctly Sample answer: 1. Concentration of Cu^{2+} ions decreases 2. Cu^{2+} ion is discharged by receiving 2 electrons to form copper atom	3
Able to give any one correct explanation	2
Able to give an idea of the discharge of ions Sample answer: Cu^{2+} ions decrease// Cu^{2+} ions are discharged	1
No response or wrong response	0

f.

Rubric	Score
Able to state the correct operational definition for the position between two metals in the Electrochemical Series. Sample answer: The further the distance between two metals in the Electrochemical Series are dipped in an electrolyte the voltmeter reading is bigger	3
Able to state the position of metals in the Electrochemical Series Sample answer: The further the distance between two metals in the Electrochemical Series the voltmeter reading is bigger	2
Able to state an idea of position of metals Sample answer: Position of metals is influenced by voltage // different metals shows different voltmeter reading	1
No response or wrong response	0

g.

Rubric	Score
Able to state all the three variables correctly Sample answer: Manipulated variable: Pairs of metals Responding variable: Voltmeter reading/voltage Constant variable: copper electrode, copper(II) sulphate solution	3
Able to state any two variables correctly	2
Able to state any one variable correctly	1
No response or wrong response	0

h.

Rubric	Score
Able to arrange in ascending order of all the metals Sample answer: Cu, P, N, O, M	3
Able to arrange any four metals in correct ascending order	2
Able to arrange any three metals in correct ascending order	1
No response or wrong response	0

i.

Rubric	Score												
Able to predict the three positive terminals and three voltage values for all pairs of metals correctly Sample answer:	3												
<table border="1"> <thead> <tr> <th>Pairs of metals</th> <th>Positive Terminal</th> <th>Voltage /V</th> </tr> </thead> <tbody> <tr> <td>M and N</td> <td>N</td> <td>2.0</td> </tr> <tr> <td>N and P</td> <td>P</td> <td>0.4</td> </tr> <tr> <td>M and P</td> <td>P</td> <td>2.4</td> </tr> </tbody> </table>	Pairs of metals	Positive Terminal	Voltage /V	M and N	N	2.0	N and P	P	0.4	M and P	P	2.4	
Pairs of metals	Positive Terminal	Voltage /V											
M and N	N	2.0											
N and P	P	0.4											
M and P	P	2.4											
Able to predict any five answers correctly	2												
Able to predict any four answers correctly	1												
Able to predict any three answers correctly	0												
Able to predict any two answers correctly													
Able to predict any one answer correctly													
No response or wrong response													

j.

Rubric	Score				
Able to classify all the four substances correctly <u>Sample answer:</u>	3				
<table border="1" style="width: 100%;"> <tr> <td data-bbox="151 286 582 362">Can be made as electrolyte</td> <td data-bbox="582 286 1013 362">Cannot be made as electrolyte</td> </tr> <tr> <td data-bbox="151 362 582 439">Sodium chloride Zinc sulphate</td> <td data-bbox="582 362 1013 439">Silver chloride Lead(II) sulphate</td> </tr> </table>	Can be made as electrolyte	Cannot be made as electrolyte	Sodium chloride Zinc sulphate	Silver chloride Lead(II) sulphate	
Can be made as electrolyte	Cannot be made as electrolyte				
Sodium chloride Zinc sulphate	Silver chloride Lead(II) sulphate				
Able to classify any three substances corectly	2				
Able to classify any two substances correctly	1				
No response or wrong response	0				

-----oooOO aĐaŽ OOooo-----