SKEMA KERTAS 3 PEPERIKSAAN PERCUBAAN SPM KIMIA
NEGERI PERLIS

Question number	Rubric	Score
1(a)	*Able to state an observation accurately* Sample answer: Rubber strip Y is extended longer than rubber strip X	3
	Able to state the observation correctly Sample answer: Rubber strip Y is extended/become longer// Rubber strip X do not extended	2
	Able to state idea of the observation Sample answer: Rubber strip extended	1
	No response or wrong response	0

Question number	Rubric	Score
1(b)	*Able to state an accurate inference for this experiment:* Sample answer: Rubber strip X is harder than rubber strip Y	3
	Able to state the inference for this experiment: Sample answer: Rubber strip X is hard// Rubber strip Y is soft	2
	Able to state the general inference for this experiment: Sample answer: X is more elastic rubber	1
	No response or wrong response	0

Question number	Rubric	Score
1(c)	*Able to write **all** the reading of rubber strip X and Y correctly with **one decimal place.*** Answer: Rubber strip X: 5.0, 5.0, 5.0, 6.0 Rubber strip Y: 5.0, 5.5, 6.4, 8.5	3
	*Able to write **all** the reading of rubber strip X and Y correctly*	2
	*Able to write **3 correct reading** for **rubber strip X** and **3 correct reading** for **rubber strip Y***	1
	No response or wrong response	0

Question number	Rubric	Score
1(d)	*Able to construct a table with correct title and units and accurately* **Type of rubber** | **Rubber strip X** | | | | **Rubber strip Y** | | | | **Weight (g)** | 0 | 15 | 30 | 45 | 0 | 15 | 30 | 45 **Length (cm)** | 5.0 | 5.0 | 5.0 | 6.0 | 5.0 | 5.5 | 6.4 | 8.5	3
	Able to construct a table without title or units and less accurately **Type of rubber** | **Rubber strip X** | | | **Rubber strip Y** | | | **Weight** | 15 | 30 | 45 | 15 | 30 | 45 **Length** | 5.0 | 5.0 | 6.0 | 5.5 | 6.4 | 8.5	2
	Able to give the idea about to construct table **Type of rubber** | **Rubber strip X** | | | **Rubber strip Y** | | | **Length** | 5.0 | 5.0 | 6.0 | 5.5 | 6.4 | 8.5	1
	No response or wrong response	0

Question	Rubric	Score
1(e)	*Able to state three variables correctly:* Sample answer: (i) **Manipulated variable** Rubber strip X, Rubber strip Y (ii) **Responding variable** The length of rubber strip after weight is removed (iii) **Fixed variable** Size of rubber strip, mass of weight	3
	Able to state any 2 of the above information correctly	2
	Able to state any 1 of the above information correctly	1
	No response or wrong response	0

Question	Rubric	Score
1(f)	*Able to state the relationship between the manipulated variable and the responding variable correctly and with direction* Sample answer: Rubber strip X is more elastic than rubber strip Y	3
	Able to state the relationship between the manipulated variable and the responding variable correctly and without direction Sample answer: The elasticity of rubber strip X is high than rubber strip Y	2
	Able to state an idea of the hypothesis Sample answer: Rubber strip x is less elastic.	1
	No response or wrong response	0

Question number	Rubric	Score
1(g)	*Able to give an accurately relationship between length of rubber strip and elasticity.* Sample answer: The length of rubber strip increases the elasticity decreases	3
	Able to give less accurately relationship between length of rubber strip and elasticity. Sample answer: The length increases the elasticity decreases	2
	Able to give and idea of relationship between length of rubber strip and elasticity Sample answer: directly proportional	1
	No response or wrong response	0

Question number	Rubric	Score
1(h)	*Able to state the operational definition correctly* Sample answer: The longer the length of rubber strip after weight is removed the less elastic the rubber strip.	3
	Able to state the operational definition less correctly Sample answer: After weight is removed the rubber strip become longer	2
	Able give an idea for operational definition Sample answer: The length of rubber strip increase	1
	No response or wrong response	0

Question	Rubric	Score
1(i)	*Able to explain the observation by stating* ***all*** *the following aspect correctly* Answer: Rubber strip Y has more double bond between carbon and carbon atom// Rubber strip X has less double bond between carbon and carbon atom// Rubber strip Y easily undergoes oxidation process compared to rubber strip X//	3
	Able to explain the observation by stating ***any two*** *of the aspect correctly*	2
	Able to explain the observation by stating ***any one*** *of the aspect correctly*	1
	No response or wrong response	0

Question number	Rubric	Score
1(j)	*Able to predict the rubber that will snap first and state the type of rubber strip X and Y correctly* Answer: Rubber Y will snap first Rubber strip X : Vulcanized rubber Rubber strip y : Unvulcanized rubber	3
	Able state ***any two*** *of the answer correctly*	2
	Able state ***any one*** *of the answer correctly*	1
	No response or wrong response	0

<table>
<tr><th>Question number</th><th>Rubric</th><th>Score</th></tr>
<tr><td rowspan="4">1(k)</td><td>Able to classify all the substances correctly

Sample answer:
<table><tr><th>Substance that can coagulate latex</th><th>Substance that cannot coagulate latex</th></tr><tr><td>Nitric acid
Methanoic acid</td><td>Sodium hydroxide
Ammonia</td></tr></table></td><td>3</td></tr>
<tr><td>Able to classify any three the substances correctly</td><td>2</td></tr>
<tr><td>Able to classify any two the substances correctly</td><td>1</td></tr>
<tr><td>No response or wrong response</td><td>0</td></tr>
</table>

Question number	Rubric	Score
2(a)	**[Able to state the aim of experiment correctly]** **Sample answer:** To construct the electrochemical series based on displacement reaction.	2
	[Able to state the aim of experiment less correctly] **Sample answer:** To construct the electrochemical series	1
	No response or wrong response	0

Question number	Rubric	Score
2(b)	**[Able to state all variables correctly]** **Answer:** Manipulated : Metals // copper, zinc, magnesium Responding : Reaction / Displacement occur Fix : Volume and concentration of solution // size of metal strip	3
	[Able to state any two variables correctly]	2
	[Able to state any one variable correctly]	1
	[Wrong response or no response]	0

Question number	Rubric	Score
2(c)	**[Able to state the hypothesis correctly by stating the relationship between manipulated variable and responding variable]** **Sample answer:** Metals which is (more electropositive) / (located higher in electrochemical series), can displace the metal which is (less electropositive) / (located lower in electrochemical series) from their salt solution.	3
	[Able to state the hypothesis less correctly by stating the relationship between manipulated variable and responding variable] **Sample answer:** Metals which is (more electropositive) / (located higher in electrochemical series), can displace the metal which is (less electropositive) / (located lower in electrochemical series).	2
	[Able to state the idea of hypothesis] **Sample answer:** Different metals have different electropositivity	1
	[Wrong response or no response]	0

Question number	Rubric	Score
2(d)	**[Able to list all reactants and apparatus correctly]** **Answer:** Reactants : Copper strip, zinc strip, magnesium strip, copper(II) nitrate solution [0.1 – 1.0 moldm^{-3}], zinc nitrate solution [0.1 – 1.0 moldm^{-3}], magnesium nitrate solution [0.1 – 1.0 moldm^{-3}] Apparatus : Beaker, measuring cylinder, sand paper.	3
	[Able to list all reactants less correctly and two apparatus] **Answer:** Reactants : Copper strip, zinc strip, magnesium strip, copper(II) nitrate solution, zinc nitrate solution, magnesium nitrate solution Apparatus : Beaker, measuring cylinder	2
	[Able to list two reactants less correctly and one apparatus] **Answer:** Reactants : Copper strip, zinc strip, magnesium strip, copper(II) nitrate solution, zinc nitrate solution, magnesium nitrate solution Apparatus : Beaker, measuring cylinder	1
	[Wrong response or no response]	0

Question number	Rubric	Score
2(e)	**[Able to list procedures correctly]** **Sample answer:** 1. Three copper strip are cleaned with sand paper. 2. 25 cm^3 of copper(II) nitrate solution, zinc nitrate solution and magnesium nitrate solution are pour into three different beakers. 3. The copper strip is put in each of beaker containing the solutions. 4. The reactions is observed and recorded in a table. 5. Steps 1 to 4 are repeated by replacing copper metal with zinc strip and magnesium strip.	3
	[Able to list procedures less correctly] **Sample answer:** Steps 2, 3, 4 and 5	2
	[Able state the idea of reaction] **Sample answer:** Step 3	1
	[Wrong response or no response]	0

<table>
<tr><th>Question number</th><th>Rubric</th><th>Score</th></tr>
<tr><td>2(f)</td><td>

[Able to draw a table to record the observation with all correct titles and the list of metal]

Sample answer:

- Title : Metals
- Title : Observation in solution
- List of metal used

<table>
<tr><th rowspan="2">Metals</th><th colspan="3">Observation/Reaction</th></tr>
<tr><th>Copper(II) nitrate</th><th>Zinc nitrate</th><th>Magnesium nitrate</th></tr>
<tr><td>Copper</td><td></td><td></td><td></td></tr>
<tr><td>Zinc</td><td></td><td></td><td></td></tr>
<tr><td>Magnesium</td><td></td><td></td><td></td></tr>
</table>

</td><td>3</td></tr>
<tr><td></td><td>

[Able to draw a table to record the observation with less correct titles and the list of metal]

Sample answer:

- Title : Metals
- Title : Observation
- List of metal used

<table>
<tr><th>Metals</th><th colspan="3">Observation/Reaction</th></tr>
<tr><td>Copper</td><td></td><td></td><td></td></tr>
<tr><td>Zinc</td><td></td><td></td><td></td></tr>
<tr><td>Magnesium</td><td></td><td></td><td></td></tr>
</table>

</td><td>2</td></tr>
</table>

<table>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td>[Able to draw a table with observation title and the list of metal]

Sample answer:
- Title : Observation
- List of metal used

<table><tr><td></td><td>Observation/Reaction</td></tr><tr><td>Copper</td><td></td></tr><tr><td>Zinc</td><td></td></tr><tr><td>Magnesium</td><td></td></tr></table></td><td>1</td></tr>
<tr><td></td><td>[Wrong response or no response]</td><td>0</td></tr>
</table>