

**55/2  
SCIENCE  
PMR  
Ogos 2013**

**PROGRAM PENINGKATAN PRESTASI  
PENILAIAN MENENGAH RENDAH 2013  
Set 1**

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**SCIENCE  
KERTAS 2**

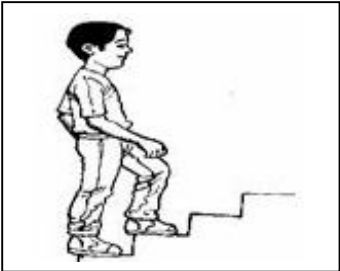
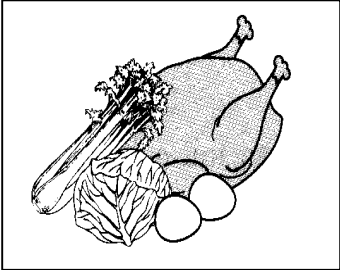
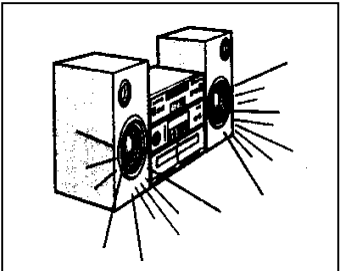
**PERATURAN PEMARKAHAN**

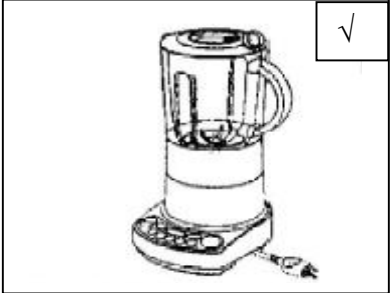
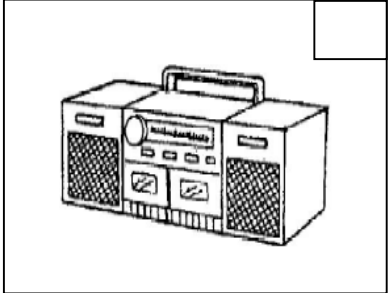
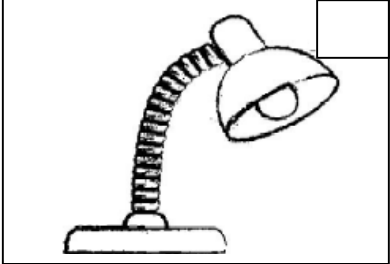
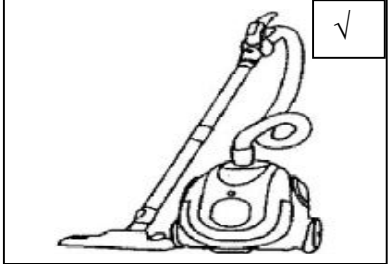
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**UNTUK KEGUNAAN PEMERIKSA SAHAJA**

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Peraturan pemarkahan ini mengandungi 12 halaman bercetak

Question/ No Soalan / No	Scheme / <i>Skema</i>	Marks Markah	Total Marks Jumlah markah
1 ( a )	<p><i>Able to state the type of energy</i></p> <p><u>Answer</u></p> <p>( a )</p> <div>  </div> <div> <p>P : Kinetic energy <i>Tenaga kinetik</i></p> </div> <div>  </div> <div> <p>Q : Chemical energy <i>Tenaga kimia</i></p> </div> <div>  </div> <div> <p>R : Sound energy <i>Tenaga bunyi</i></p> </div> <p>( b ) <i>Able to choose the statement of energy correctly</i></p> <p><u>Answer</u></p> <div> <input checked="" type="checkbox"/> </div> <p>Can change from one form to another. <i>Boleh menukar daripada satu bentuk kepada bentuk yang lain.</i></p> <div> <input type="checkbox"/> </div> <p>Cannot change from one form to another. <i>Tidak boleh menukar daripada satu bentuk kepada bentuk yang lain</i></p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p>	<p>3</p> <p>1</p>

<p>( c )</p>	<p><i>Able to choose the changes of energy correctly</i></p> <p><u>Answer</u></p> <div style="display: flex; justify-content: space-around;"> <div>  </div> <div>  </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div>  </div> <div>  </div> </div>	<p>1</p> <p>1</p>	<p>2</p>
<p><b>TOTAL /JUMLAH</b></p>			<p>6</p>

Question/ No Soalan / No	Scheme / <i>Skema</i>	Marks Markah	Total Marks Jumlah Markah						
2(a)	<p><i>Able to state the classes of animals</i></p> <p><u>Answer</u></p> <p><i>A: Bird/burung</i></p> <p><i>B: Mammals/mamalia</i></p>	<p>1</p> <p>1</p>	<p>2</p>						
(b)	<p><i>Able to state the method of reproduction</i></p> <p><u>Answer</u></p> <table border="1"> <thead> <tr> <th>Animals <i>haiwan</i></th> <th>Method of reproduction <i>kaedah pembiakan</i></th> </tr> </thead> <tbody> <tr> <td>Animal <i>Ahaiwan A</i></td> <td>Lay egg/<i>bertelur</i></td> </tr> <tr> <td>Animal <i>Bhaiwan B</i></td> <td>Give birth to young <i>Melahirkan anak</i></td> </tr> </tbody> </table>	Animals <i>haiwan</i>	Method of reproduction <i>kaedah pembiakan</i>	Animal <i>Ahaiwan A</i>	Lay egg/ <i>bertelur</i>	Animal <i>Bhaiwan B</i>	Give birth to young <i>Melahirkan anak</i>	<p>1</p> <p>1</p>	<p>2</p>
Animals <i>haiwan</i>	Method of reproduction <i>kaedah pembiakan</i>								
Animal <i>Ahaiwan A</i>	Lay egg/ <i>bertelur</i>								
Animal <i>Bhaiwan B</i>	Give birth to young <i>Melahirkan anak</i>								
(c)	<p><i>Able to give a similar characteristic of animal</i></p> <p><u>Answer</u></p> <p>Warm blooded/<i>berdarah panas</i></p>	<p>1</p>	<p>1</p>						
(d)	<p><i>Able to give reason</i></p> <p><u>Answer</u></p> <p>Give birth to young</p>	<p>1</p>	<p>1</p>						
	<b>TOTAL /JUMLAH</b>		<b>6</b>						

Question/ No Soalan / No	Scheme / <i>Skema</i>	Marks <i>Markah</i>	Total Marks <i>Jumlah Markah</i>
3(a)	<p><i>Able to give a definition of menstruation</i></p> <p><u>Answer</u></p> <p>The discharge of an fertilised egg, uterus lining and blood through the vagina</p>	1	1
(b)	<p><i>Able to give a definition of menstruation</i></p> <p><u>Answer</u></p> <p>Ovulation/an ovum is released</p>	1	1
(c)	<p><i>Able to state the cycle of menstruation</i></p> <p><u>Answer</u></p> <p>28 days</p>	1	1
(d)	<p><i>Able to predict the time of fertilisation</i></p> <p><u>Answer</u></p> <p>Day 12 – 16</p>	1	1
(e)	<p><i>Able to give the time of ovulation and the next period</i></p> <p><u>Answer</u></p> <p>(i) Day 15</p> <p>(ii) Day 30</p>	1	2
	<b>TOTAL /JUMLAH</b>		<b>6</b>

Question/ No Soalan/ No	Scheme / <i>Skema</i>	Marks Markah	Total Marks Jumlah Markah
4(a)	<i>Able to give the method of water decomposition</i>  <u>Answer</u> elektrolisis	1	1
( b )	<i>Able to name the electrode</i>  <u>Answer</u> katod	1	1
( c )	<i>Able to name the gas</i>  <u>Answer</u>  oksigen	1	1
( d )	<i>Able to state the test for the gas</i>  <u>Answer</u>  burning wooden splinter	1	1
( e )	<i>Able to give volume of the gas</i>  <u>Answer</u>  5cm <sup>3</sup>	1	1
( f )	<i>Able to give the importance of the process in daily life</i>  <u>Answer</u>  menguji ketulenan air terutama dalam kajian lapangan untuk menghasilkan gas oksigen dan gas hidrogen untuk industri	1	1
	<b>TOTAL /JUMLAH</b>		6

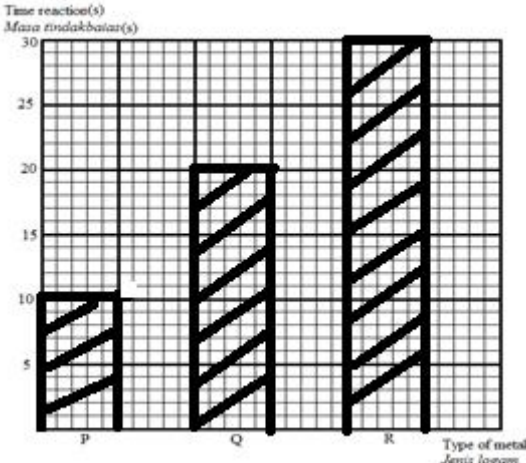
Question/ No Soalan/ No	Scheme / <i>Skema</i>	Marks Markah	Total Marks Jumlah Markah
5 a )	<i>Able to state the differences to the aquatic plant</i>  <u>Answer</u> Aquatic plant can stay upright when the beaker is filled with water. <i>Tumbuhan akuatik dapat berdiri tegak apabila bikar diisi air .</i>	1	1
(b)	<i>Able to state the function of the water to aquatic plant</i>  <u>Answer</u>  Provide support for aquatic plant <i>Memberi sokongan kepada tumbuhan akuatik.</i>  <i>*Accept any suitable answer.</i>	1	1
(c)(i)	<i>Able to name the structure of the plant</i>  <u>Answer</u>  Air sac <i>Ruang udara</i>	1	
(ii)	<i>Able to give a reason</i>  <u>Answer</u>  Aquatic plant unable to float // cannot float// unable stay upright in water. <i>Tumbuhan akuatik gagal terapung // tidak dapat terapung // gagal berdiri tegak di dalam air.</i>	1	
(iii)	<i>Able to give example of aquatic plant</i>  <u>Answer</u>  Water lily // Lotus // Hydrilla // Water hyacinth // Elodea // Lemna // Pistia // Teratai // Hydrilla // Keladi bunting // Elodia //Kiambang// Selada air  <i>*Accept any suitable answer.</i>	1	3
(d)	<i>Able to name the support system for the plants</i>  <u>Answer</u>  Thorn / <i>Duri</i>	1	
	Tendrils / <i>Sulur paut</i>	1	2

(e)	<p><i>Able to give reason</i></p> <p><u>Answer</u></p> <p>To obtain // to get light ( sunlight ) for photosynthesis.</p> <p><i>Untuk mendapatkan cahaya ( cahaya matahari ) untuk melakukan fotosintesis.</i></p>	1	1
	<b>TOTAL /JUMLAH</b>		<b>8</b>



Question/ No Soalan / No	Scheme / Skema	Marks Markah	Total Marks Jumlah markah
6 ( a )	<i>Able to give reason</i>  <u>Answer</u> Cigarette smoke / <i>Asap rokok</i>	1	1
( b )(i)	<i>Able to state the colour of white cotton</i>  <u>Answer</u> yellowish / <i>kekunigan</i>	1	
(ii)	<i>Able to give reason</i>  <u>Answer</u> cigarette smoke contain tar / <i>asap rokok mengandungi tar</i>	1	
(iii)	<i>Able to predict the colour of the cotton wool</i>  <u>Answer</u> dark yellow / <i>kuning kehitaman</i>	1	3
(c)( i)	<i>Able to name a harmful substance</i>  <u>Answer</u> sulfur dioxide / <i>sulfur dioksida</i> // hydrocarbon / <i>hidrokarbon</i>	1	
(ii)	<i>Able to state a deasease</i>  <u>Answer</u> damage lungs tissues / <i>memusnahkan tisu peparu</i> // cause cancer / <i>menyebabkan kanser</i>	1	
( iii)	<i>Able to suggest a method</i>  <u>Sample answer</u> increase the height of chimney / <i>tinggikan ketinggian cerobong</i> Fixing a filter at the chimney / <i>memasang penapis pada cerobong</i>	1	3
(d)	<i>Able to give a suggestion</i>  <u>Answer</u> car pooling / <i>berkongsi kereta</i> // use public transport / <i>guna kenderaan awam</i>	1	1
	<b>TOTAL /JUMLAH</b>		<b>8</b>

Question/ No Soalan / No	Scheme / Skema	Marks Markah	Total Marks Jumlah Markah										
7( a	<p><i>Able to state the properties of objects</i></p> <p><u>Answer</u></p> <table border="1"> <thead> <tr> <th>Objects / <i>Objek</i></th> <th>Properties / <i>Sifat</i></th> </tr> </thead> <tbody> <tr> <td>Nickel coin <i>Duit syiling nikel</i></td> <td>Magnetic substances <i>Bahan magnet</i></td> </tr> <tr> <td>Plastic spoon <i>Sudu plastik</i></td> <td>Non magnetic substances <i>Bahan bukan magnet</i></td> </tr> <tr> <td>Glass rod <i>Rod kaca</i></td> <td>Non magnetic substances <i>Bahan bukan magnet</i></td> </tr> <tr> <td>Iron nail <i>Paku besi</i></td> <td>Magnetic substances <i>Bahan magnet</i></td> </tr> </tbody> </table> <p>* Choose four objects only. / <i>Pilih empat objek sahaja.</i></p>	Objects / <i>Objek</i>	Properties / <i>Sifat</i>	Nickel coin <i>Duit syiling nikel</i>	Magnetic substances <i>Bahan magnet</i>	Plastic spoon <i>Sudu plastik</i>	Non magnetic substances <i>Bahan bukan magnet</i>	Glass rod <i>Rod kaca</i>	Non magnetic substances <i>Bahan bukan magnet</i>	Iron nail <i>Paku besi</i>	Magnetic substances <i>Bahan magnet</i>	4	4
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Iron nail <i>Paku besi</i>	Magnetic substances <i>Bahan magnet</i>												
( b )	<p><i>Able to classify the objects</i></p> <p><u>Answer</u></p> <div style="border: 1px solid black; padding: 5px; text-align: center;">       Nickel coin , Plastic spoon ,        Glass rod , Iron nail  <i>Duit syiling nikel , Skru kuprum, Sudu plastik,        Rod kaca, Paku besi</i> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">         Magnetic substances <i>Bahan magnet</i> </div> <div style="text-align: center;">         Properties Of object       </div> <div style="border: 1px solid black; padding: 5px; text-align: center;">         Non- Magnetic substances <i>Bahan bukan</i> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">         Nickel coin , Iron nail <i>Duit syiling nikel , Skru kuprum, Paku besi</i> </div> <div style="text-align: center;">         Name of object       </div> <div style="border: 1px solid black; padding: 5px; text-align: center;">         Plastic spoon , Glass rod <i>Sudu plastik , Rod kaca</i> </div> </div>	4	4										
	<b>TOTAL /JUMLAH</b>		<b>8</b>										

No	Mark Scheme	Mark	
8(a)(i)	<p><i>Able to state the difference by observing the diagram.</i></p> <p><u>Sample Answer</u></p> <p>The Iron nail get rusty faster/ealier/take shorter time than the copper spoon  // The Copper spoon get rusty later/slower/take longer time than the iron nail.</p>	1	1
8(a)(ii)	<p><i>Able to give inference.</i></p> <p><u>Sample Answer</u></p> <p>The iron nail get rusty faster <b>because</b> iron metal very reactive than copper.</p>	1	1
8(b)(i)	<p><i>Able to give the reading.</i></p> <p>Q = 20 s  R = 30 s</p>	1 1	2
8(b)(ii)	<p><i>Able to state hypothesis.</i></p> <p>The different type of metal, give the different rate of reaction  // The different type of metal, take the different time to react with oxygen.</p>	1	1
8(b)(iii)	<p><i>Able to identify according to the reactivity of metal.</i></p> <p>P = Magnesium</p>	1	1
8(b)(iv)	<p><i>Able to draw a bar chart.</i></p>  <p>The bar height = 1 mark  The same wide = 1 mark</p>	1 1	2

8(c)	<p><i>Able to relate between type of metal and time taken to react.</i></p> <p><u>Sample answer</u></p> <p>The different type of metal, take the different time to react.</p>	1	1
8(d)	<p><i>Able to state the variable</i></p> <p><u>Sample answer</u></p> <p>Manipulated variable : The type of metal  Responding variable : The time taken to react with oxygen.</p>	1 1	2
8(e)	<p><i>Able to state the meaning of the 'rate of reaction' operationally.</i></p> <p><u>Sample answer</u></p> <p>The rate of reaction is the time taken for the reaction between metal and oxygen to form metal oxide.</p> <p>Or The time taken to metal oxide formed.</p>	1	1
	JUMLAH		12