

SULIT
55/2
SCIENCE
Kertas 2
Ogos
2008
1½ jam

NO. KAD PENGENALAN

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ANGKA GILIRAN

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**PERSIDANGAN KEBANGSAAN PENGETUA-PENGETUA
SEKOLAH MENENGAH MALAYSIA (PKPSM) KEDAH**

PEPERIKSAAN PERCUBAAN PMR 2008

SCIENCE

Kertas 2

Satu jam tiga puluh minit

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

1. *Tuliskan nombor kad pengenalan dan angka giliran anda pada ruang yang disediakan .*
2. *Kertas soalan ini adalah dalam dwibahasa .*
3. *Soalan dalam bahasa Inggeris mendahului soalan yang sepadan dalam bahasa Melayu.*
4. *Calon dibenarkan menjawab keseluruhan atau sebahagian soalan sama ada dalam bahasa Inggeris atau bahasa Melayu.*
5. *Calon dikehendaki membaca maklumat di halaman 2.*

<i>Kod Pemeriksa</i>			
Bahagian	Soalan	Markah Penuh	Markah Diperolehi
A	1	6	
	2	6	
	3	7	
	4	7	
	5	6	
	6	8	
B	7	8	
	8	12	
Jumlah		60	

Kertas soalan ini mengandungi 24 halaman bercetak

Bahagian A

[40 marks]

Answer all questions

1. (a) (i) Diagram 1 shows the pictures of three different substances.

Rajah 1 menunjukkan gambar tiga bahan yang berbeza.

Draw lines to show the correct answers .

Lukiskan garisan untuk menunjukkan jawapan yang betul .

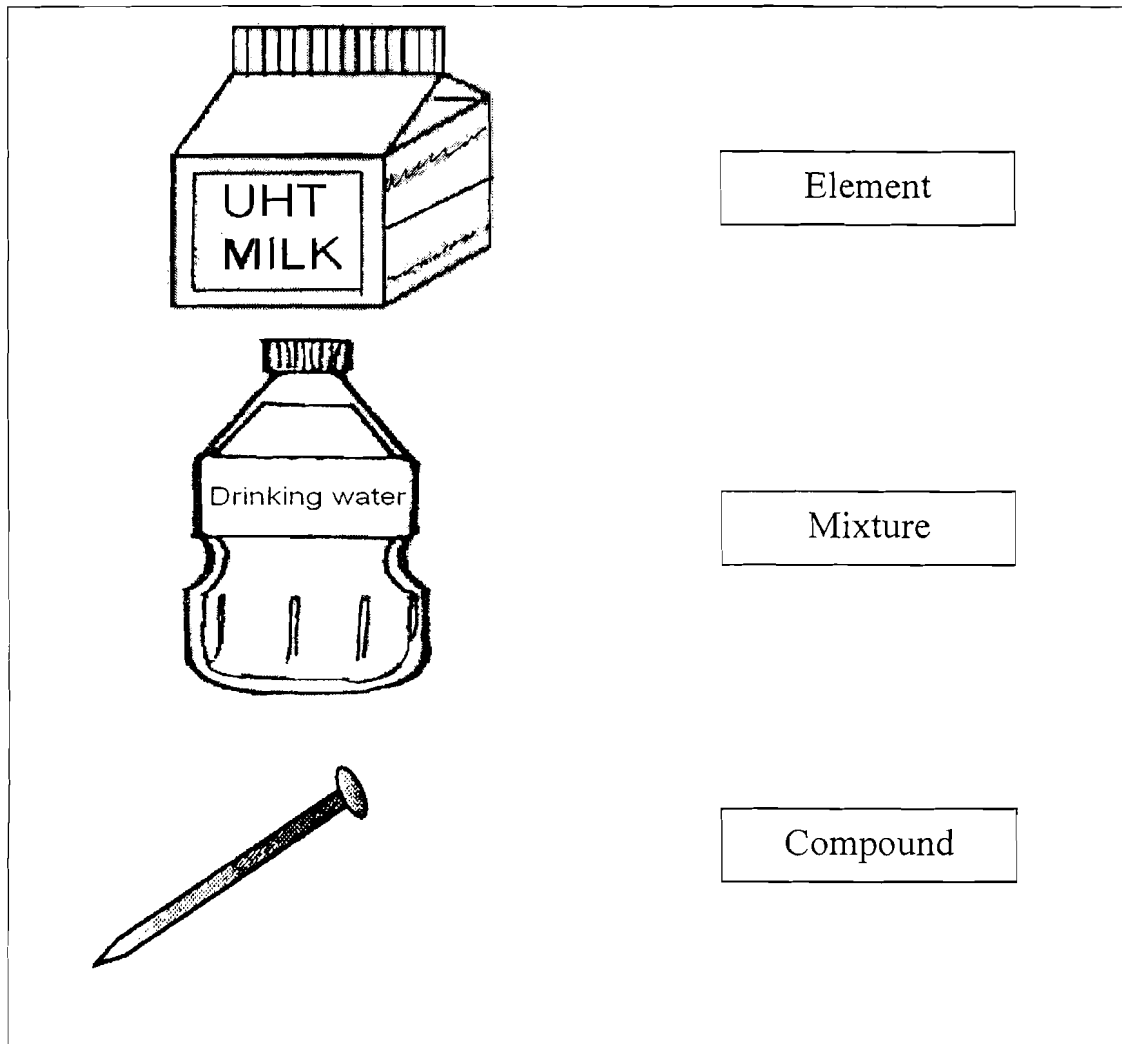


Diagram 1

Rajah 1

[3 marks]

3

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(ii) Circle the words in the box below to show two other examples of element.

Bulatkan perkataan dalam kotak di bawah untuk menunjukkan dua contoh unsure

Air Udara	Sulphur Sulfur	Silver Perak	Carbon dioxide Karbon dioksida
--------------	-------------------	-----------------	-----------------------------------

2

[2 marks]

(b) State **one** difference between metals and non-metals.

*Nyatakan **satu** perbezaan di antara logam dan bukan logam.*

.....

.....

.....

1

[1 mark]

6

2. Diagram 2.1 and 2.2 show two flowers of different plants.

Rajah 2.1 and 2.2 menunjukkan bunga bagi dua tumbuhan yang berbeza.

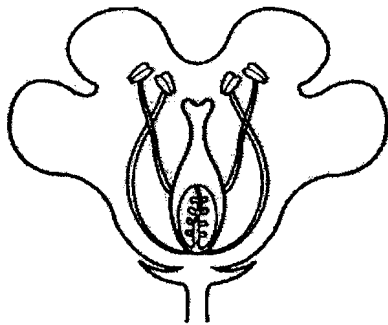


Diagram 2.1
Rajah 2.1

Wind
Angin

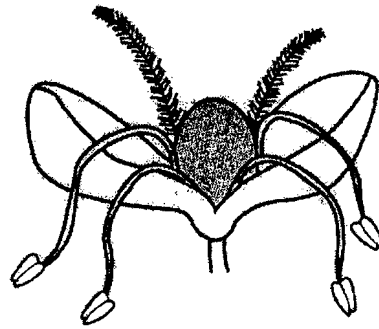


Diagram 2.2
Rajah 2.2

Insect
Serangga

Water
Air

(a) In Diagram 2.1 and 2.2, draw lines to match the flowers with their pollinating agents.

Bagi Rajah 2.1 dan 2.2, lukis satu garisan untuk menyesuaikan bunga dan agen pendebungaan.

[2 marks]

(b) Give two characteristics of flowers which are pollinated by insects and wind respectively.

Berikan dua ciri bagi bunga yang didebungakan oleh serangga dan angin.

i. Insect / Serangga :

.....
.....

[2 marks]

ii. Wind / Angin :

.....
.....

[2 marks]

Lihat sebelah
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2

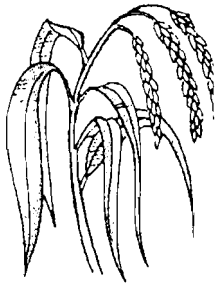
2

2

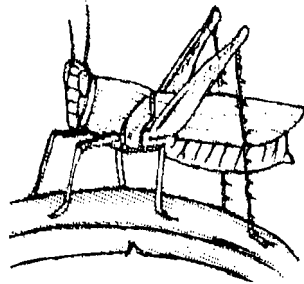
6

3. Diagram 3 shows pictures of a group of animals.

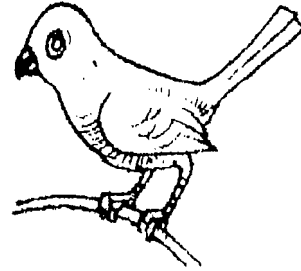
Rajah 3 di bawah menunjukkan gambar sekumpulan haiwan.



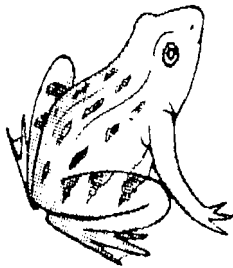
Paddy / Padi



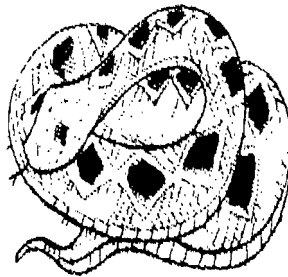
Grasshopper / Belalang



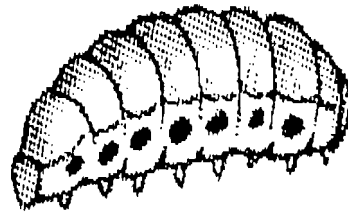
Sparrow / Burung layang – layang



Frog / Katak



Snake / Ular



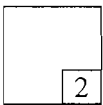
Caterpillar / Beluncas

Diagram 3

Rajah 3

(a) Based on Diagram 3, construct a food web.

Berdasarkan gambar dalam rajah 3, bina satu siratan makanan



[2 marks]

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(b) From the food web you have constructed in 3 (a) , state the :

Berdasarkan siratan makanan yang di bina di 3 (a) , nyatakan :

i. tertiary consumer :
pengguna tertiar

[1 mark]

□
1

(c) i. Based on the food web which has been constructed in 3 (a) , name one pest of paddy plant.

Berdasarkan siratan makanan yang dibina di 3 (a) , namakan satu organisma perosak kepada pokok padi .

.....

[1 mark]

□
1

ii. State one natural method which control the population of the pest ?

Namakan satu kaedah untuk mengawal populasi organisma perosak secara semulajadi.

.....

[1 mark]

□
1

(d) What will happen to the population of frog if the population of the snake increases ?

Apakah yang berlaku pada populasi katak jika populasiular meningkat dengan cepat ?

.....

[1 mark]

□
1

(e) From the food web in 3 (a) , give an example of animal in each of the following interaction.

Berdasarkan siratan makanan di 3 (a) , berikan contoh haiwan bagi interaksi berikut.

i. Competition :

Persaingan

[1 mark]

□
1

□
7

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4. Diagram 4.1 shows the apparatus used for separating the fractions of petroleum.

Rajah 4.1 menunjukkan radas yang digunakan untuk mengasingkan pecahan-pecahan petroleum.

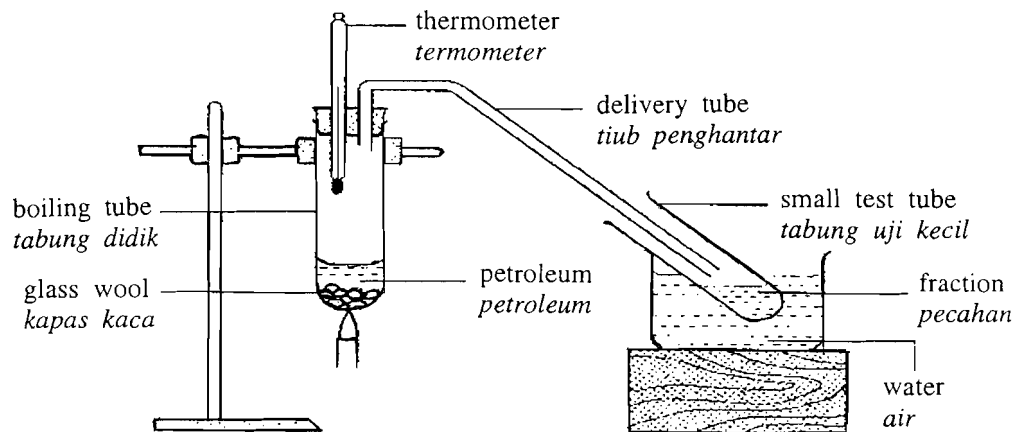


Diagram 4.1

(a) Based on Diagram 4.1, name the method used to separate petroleum into fractions.

Berdasarkan Rajah 4.1, namakan kaedah yang digunakan untuk mengasingkan petroleum kepada pecahan-pecahannya.

1

..... [1 mark]

(b) State **one** property of petroleum that enables it to be separated into fractions.

Nyatakan **satu** sifat petroleum yang membolehkan ia diasingkan kepada pecahan-pecahan.

1

..... [1 mark]

(c) Based on your answer in (b), give the first fraction which can be collected in the test tube.

Berdasarkan jawapan anda dalam (b), berikan pecahan yang pertama sekali yang dapat dikumpulkan dalam tabung uji.

1

..... [1 mark]

Test tube/Tabung uji	Temperature range / Julat suhu
P	30 ⁰ C – 80 ⁰ C
Q	80 ⁰ C – 120 ⁰ C
R	120 ⁰ C – 160 ⁰ C
S	160 ⁰ C – 200 ⁰ C

Table 4.1 / Jadual 4.1

Table 4.1 shows the temperature range over which each fraction of the petroleum boils.

Jadual 4.1 menunjukkan julat suhu setiap pecahan petroleum yang dididih.

(d) Based on Table 4.1, give **two** differences between fraction **P** and fraction **S**.

Berdasarkan Jadual 4.1, berikan **dua** perbezaan antara pecahan **P** dengan pecahan **S**.

1.

2.

[2 marks]

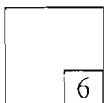
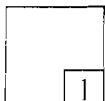
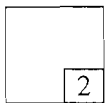
(e) The world now is facing petroleum crisis . Suggest **one** way to overcome this problem.

Dunia sekarang berhadapan dengan krisis harga petroleum. Cadangkan **satu** cara bagaimana ianya dapat diatasi.

.....

.....

[1 mark]



5. Diagram 5.1 shows two potted plants P and Q placed under sunlight for a few hours. The plants have been kept in the dark for about 24 hours. A leaf is plucked from each plant and tested for the presence of starch.
- Rajah 5.1 menunjukkan dua pokok berpasu, P dan Q diletakkan di bawah cahaya matahari selama beberapa jam. Sebelum itu, kedua-dua pokok berpasu ini diletakkan di dalam gelap selama 24 jam. Sehelai daun dipetik dari setiap pokok dan diuji untuk menunjukkan kehadiran kanji.*

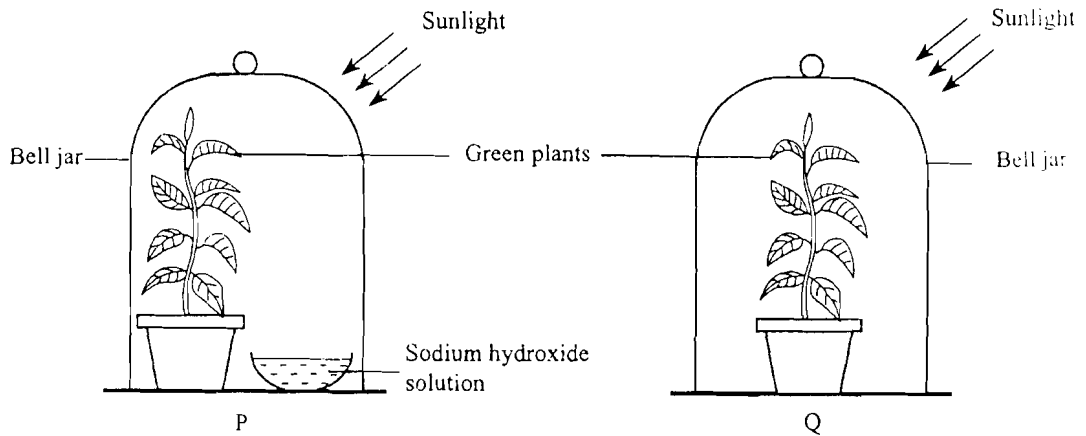


Diagram 5.1

- (a) What is the function of sodium hydroxide solution?
Apakah fungsi larutan kalium hidroksida?

.....

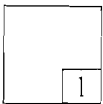
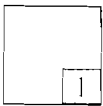
[1 mark]

- (b) Why are these two potted plants kept in the dark for 24 hours?
Mengapakah kedua-dua pokok berpasu diletakkan di dalam gelap selama 24 jam?

.....

[1 mark]

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(c) A few drops of iodine solution are dripped onto the leaves from plant P and plant Q as shown in Diagram 5.2.

Beberapa titis larutan iodine telah dititiskan ke atas daun dari pokok P dan pokok Q seperti di rajah 5.2.

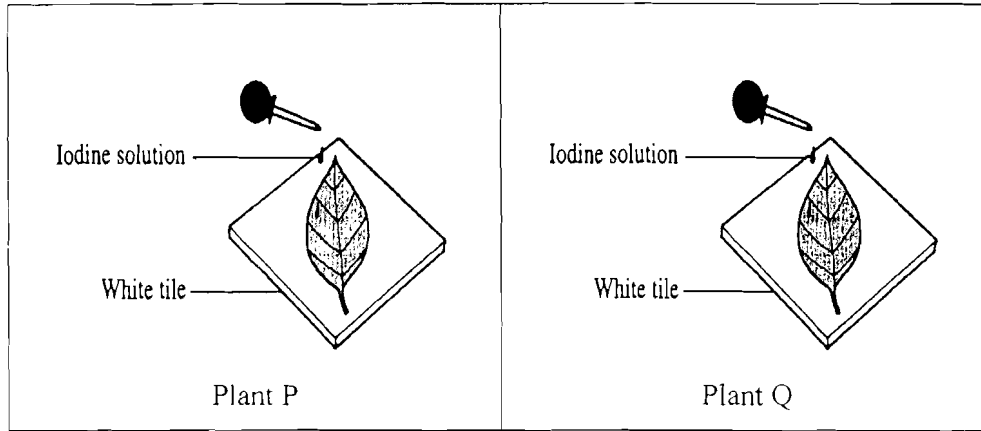


Diagram 5.2

i. Which of the leaf will change to dark blue ?

Daun manakah yang akan bertukar kepada biru gelap ?

.....

[1 mark]

ii. Explain your answer in c (i).

Terangkan jawapan anda di c (i).

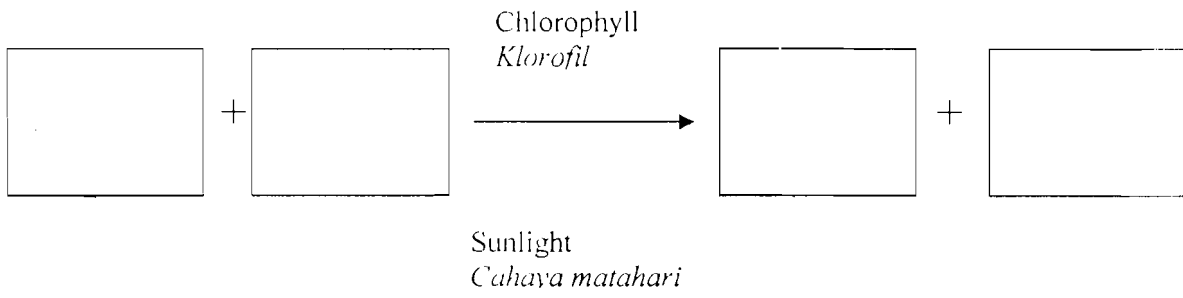
.....

.....

[1 mark]

(d) Complete the word equation for the process of photosynthesis .

Lengkapkan persamaan perkataan untuk proses fotosintesis .



3

7

[3 marks]

6. Diagram 6.1 shows parts of the electrical power transmission system.
Rajah 6.1 menunjukkan sebahagian sistem penghantaran tenaga elektrik .

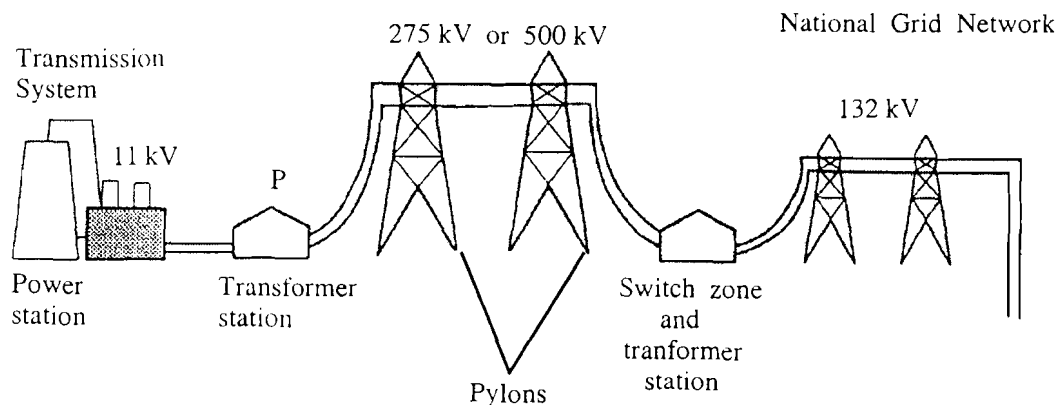


Diagram 6.1

- (a) Based on Diagram 6.1 , state the role of transformer station P.

Berdasarkan Rajah 6.1 , nyatakan peranana transformer P.

.....
.....

[1·marks]

- (b) Diagram 6.2 shows part of a transformer

Rajah 6.2 menunjukkan sebahagian daripada transformer.

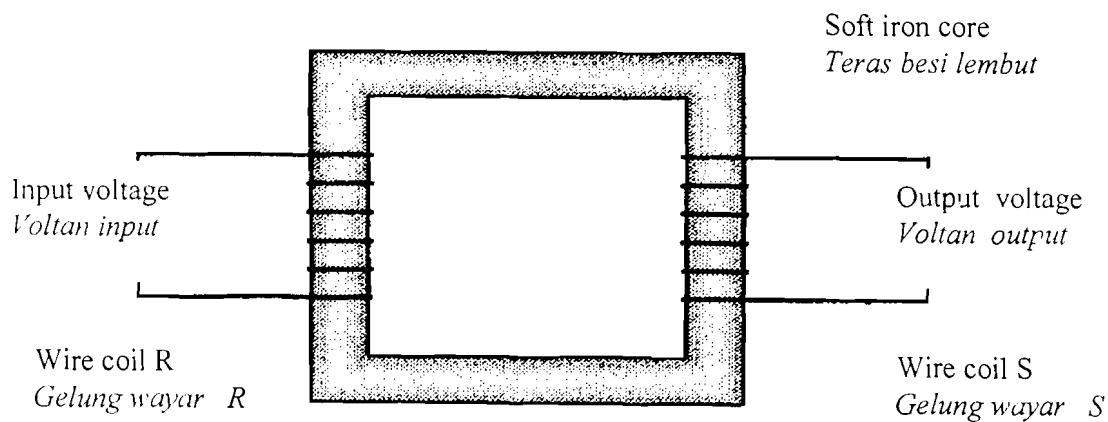


Diagram 6.2

Lihat sebelah
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Based on Diagram 6.2 , explain how does the transformer shown above can be converted into a step-down transformer and a step- up transformer respectively.

Berdasarkan Rajah 6.2 , terangkan bagaimana transformer yang ditunjukkan di atas boleh diubah kepada transformer injak turun dan transformer injak naik.

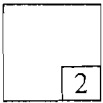
a. Step-up transformer [Transformer injak naik]

.....
.....

b. Step-down transformer [Transformer injak turun]

.....
.....

[2 marks]

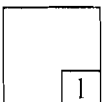


(c) i. If one of the power stations is closed for repair, what will happen to the electrical power supply in this area ?

Jika salah satu stesen janakuasa ditutup untuk dibaikpulih. Apakah yang akan berlaku kepada bekalan kuasa elektrik di sekitar kawasan tersebut?

.....
.....

[1 mark]

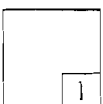


ii. Explain your reason in c (i)

Terangkan jawapan anda di c (i).

.....
.....

[1 mark]



- d. Diagram 6.3 shows a transformer built by a group of students in the laboratory.
Rajah 6.3 menunjukkan sebuah transformer yang dibina oleh sekumpulan pelajar di makmal.

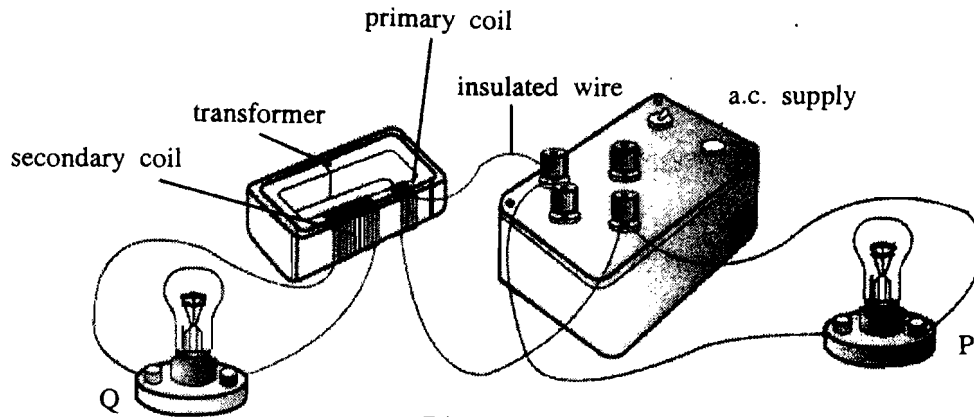


Diagram 6.3

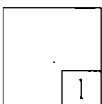
Table 1.1 shows the results of the activities.

Jadual 1. 1 menunjukkan keputusan daripada aktiviti mereka.

Type of transformer <i>Jenis transformer</i>	Number of turns <i>Bilangan lilitan</i>	
	Primary coil <i>Gegelung primer</i>	Secondary coil <i>Gegelung sekunder</i>
Step-down transformer <i>Transformer injak turun</i>	100	50
Step – up transformer <i>Transformer injak -naik</i>	50	100

Table 1.1

- i. Based on the result in Table 1.1, which bulb is brighter if the number of turns in the primary coil is more than the number of turns in the secondary coil?
Berdasarkan Jadual 1.1, mentol manakah yang lebih cerah jika bilangan lilitan dalam gegelung primer lebih besar berbanding bilangan lilitan dalam gegelung sekunder.?



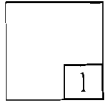
[1 mark]

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- ii. Explain your answer in d (ii).
Terangkan jawapan anda di d (ii).

.....

.....

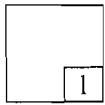


[1 mark]

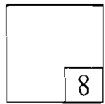
- iii. What will happen to the brightness of bulb Q if the number of turns in the secondary coil increases ?
Apakah yang berlaku pada kecerahan mentol Q jika bilangan lilitan gegelung sekunder bertambah ?

.....

.....

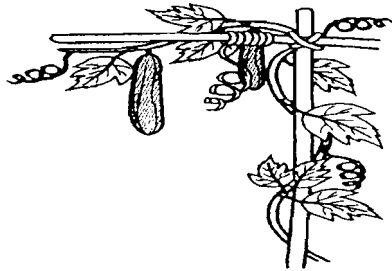


[1 mark]

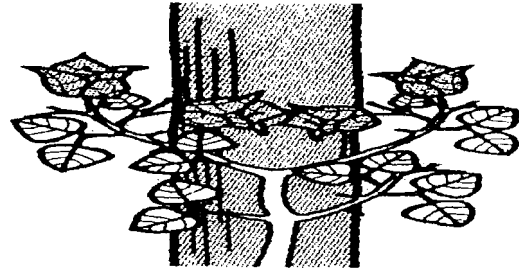


Section B
[Bahagian B]
[20 marks]

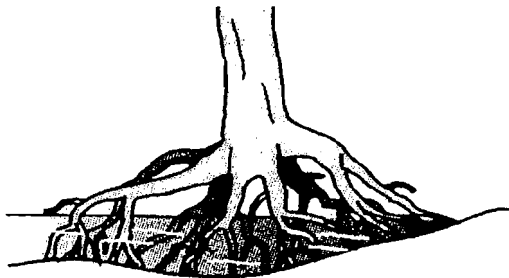
7. Diagrams 7 shows four plants P, Q, R and S.
Rajah 7 menunjukkan empat jenis tumbuhan P, Q, R dan S.



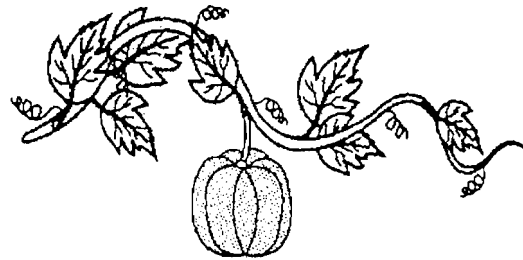
P - Cucumber plant



Q - Rose plant



R - Mangrove tree



S- Pumpkin plant

Diagram 7

(a) Based on your observation, name the support system for each of the plant P,Q,R and S
Berdasarkan pemerhatian anda, namakan sistem sokongan bagi setiap tumbuhan P, Q, R dan S.

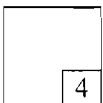
P :

Q :

R :

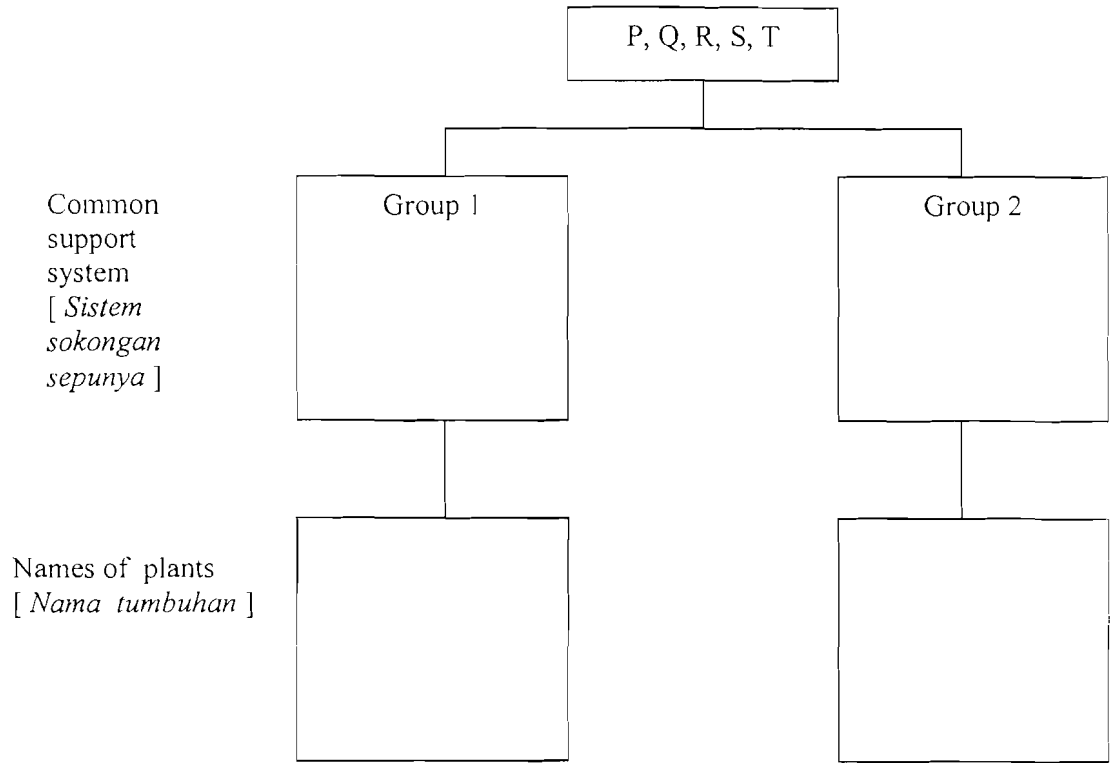
S :

[4 marks]



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(b) Classify plants P, Q, R and S into two groups based on common support system.
Kelaskan tumbuhan P, Q, R dan S kepada dua kumpulan berdasarkan sistem sokongan



[4 marks]

4

8

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8. (a) A student found that when he drives a black painted car , he feels hotter than when he is driving a white painted car as shown in Diagram 8.1.
Seorang pelajar dapati bahawa apabila ia memandu kereta berwarna hitam, ia merasai lebih panas berbanding apabila ia memandu kereta berwarna putih seperti ditunjukkan dalam Rajah 8.1.

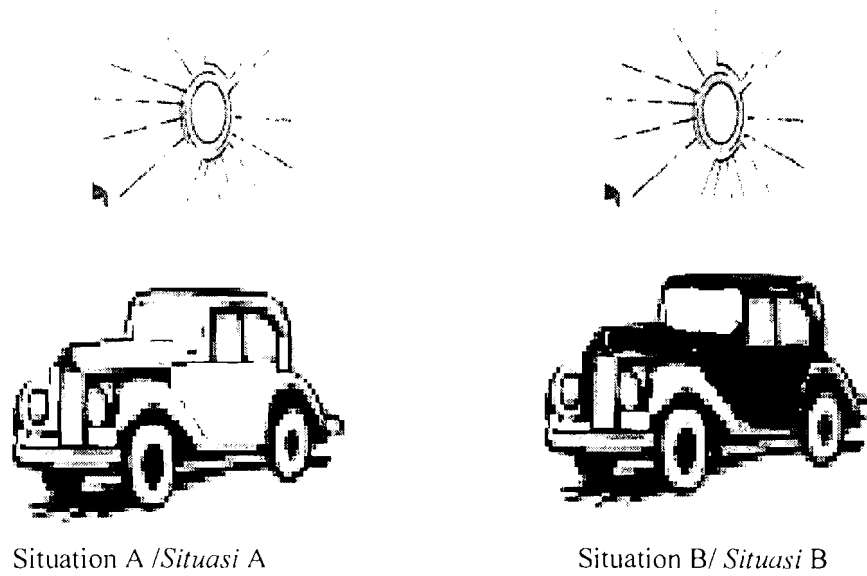


DIAGRAM 8.1/ Rajah 8.1

- i. Based on your observations in Diagram 8.1, state the difference in the amount of heat received by the car in Situation A and Situation B.
Berdasarkan pemerhatian anda pada Rajah 8.1, nyatakan perbezaan jumlah haba yang diterima oleh kereta dalam Situasi A dan Situasi B.

.....
.....

[1 mark]

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ii. What inference can be made based on Situation A and Situation B in Diagram 8.1?
Apakah inferens yang boleh dibuat berdasarkan Situasi A dan Situasi B pada Rajah 8.1?

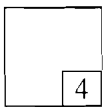
.....
.....
.....

[1 mark]

iii. State **one** hypothesis based on your observations in Diagram 8.1.
Nyatakan satu hipotesis berdasarkan pemerhatian anda pada Rajah 8.1.

.....
.....
.....

[1 mark]



- (b) A student carried out an experiment to study heat absorption in Situation A and Situation B. Diagram 8.2 shows the set-up of the apparatus to investigate the absorption of heat by different coloured surfaces.

Seorang pelajar menjalankan satu eksperimen untuk mengkaji Situasi A dan Situasi B. Rajah 8.2 menunjukkan susunan alat radas untuk mengkaji penyerapan haba oleh permukaan yang berbeza warna.

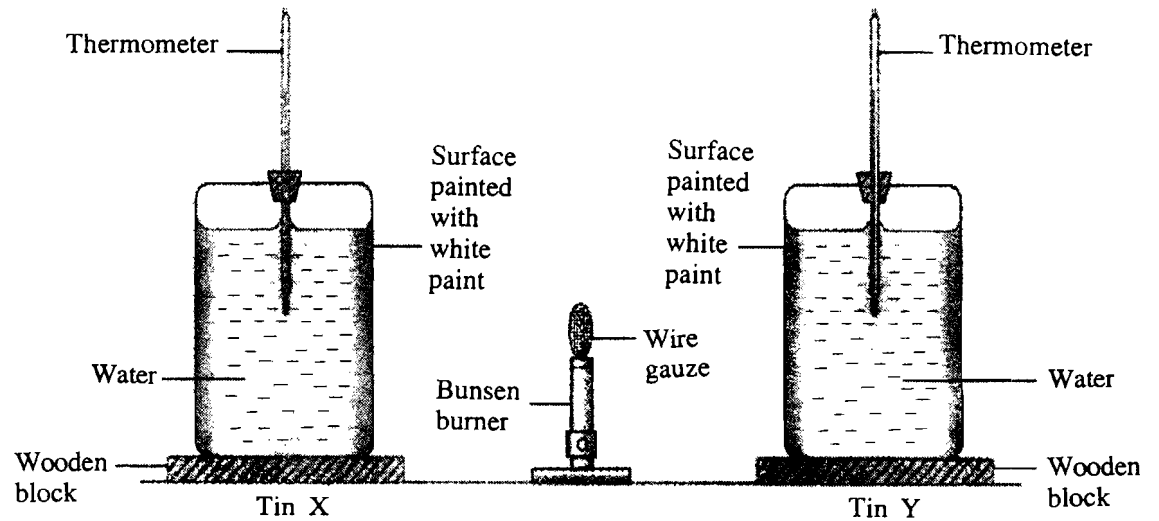


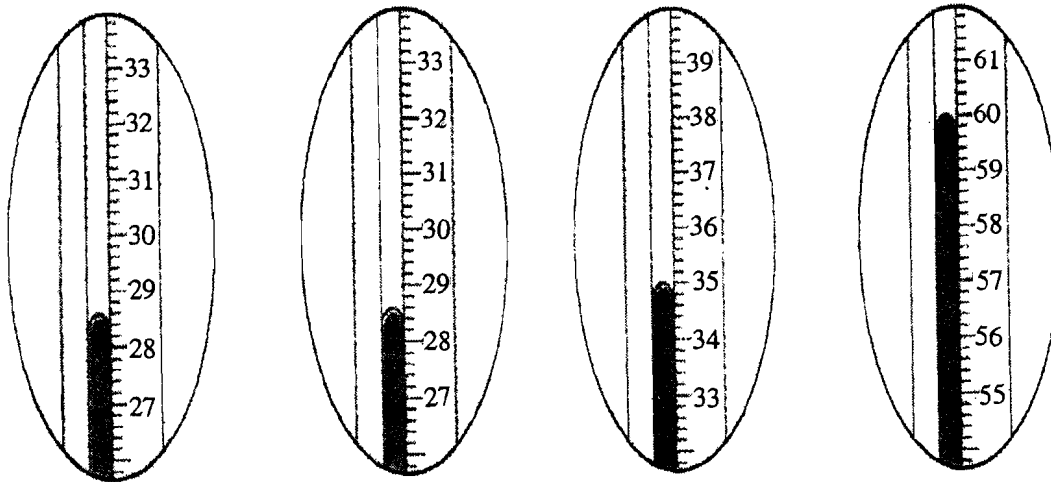
DIAGRAM 8.2/ *Rajah 8.2*

Procedure:

Prosedur:

1. The initial temperature of the water in each of the two tins is recorded.
Suhu awal air di kedua-dua tin dicatatkan.
2. The Bunsen burner is lighted and left burning for 15 minutes.
Penunu Bunsen dinyalakan dan dibiarkan selama 15 minit.
3. The final temperature of the water in each of the tins is recorded.
Suhu akhir air di kedua-dua tin dicatatkan.

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Tin X

Tin Y

Tin X

Tin Y

Initial temperature of water

Final temperature of water

Suhu awal air

Suhu akhir air

DIAGRAM 8.3/Rajah 8.3

Based on Diagram 8.3, record the readings of thermometers in Table 8.4.

Berdasarkan Rajah 8.3, catatkan bacaan jangkasuhu dalam Jadual 8.4.

Tin	Temperature / °C <i>Suhu / °C</i>		
	Initial <i>Awal</i>	Final <i>Akhir</i>	Rise <i>Meningkat</i>
X			
Y			

(2 marks)

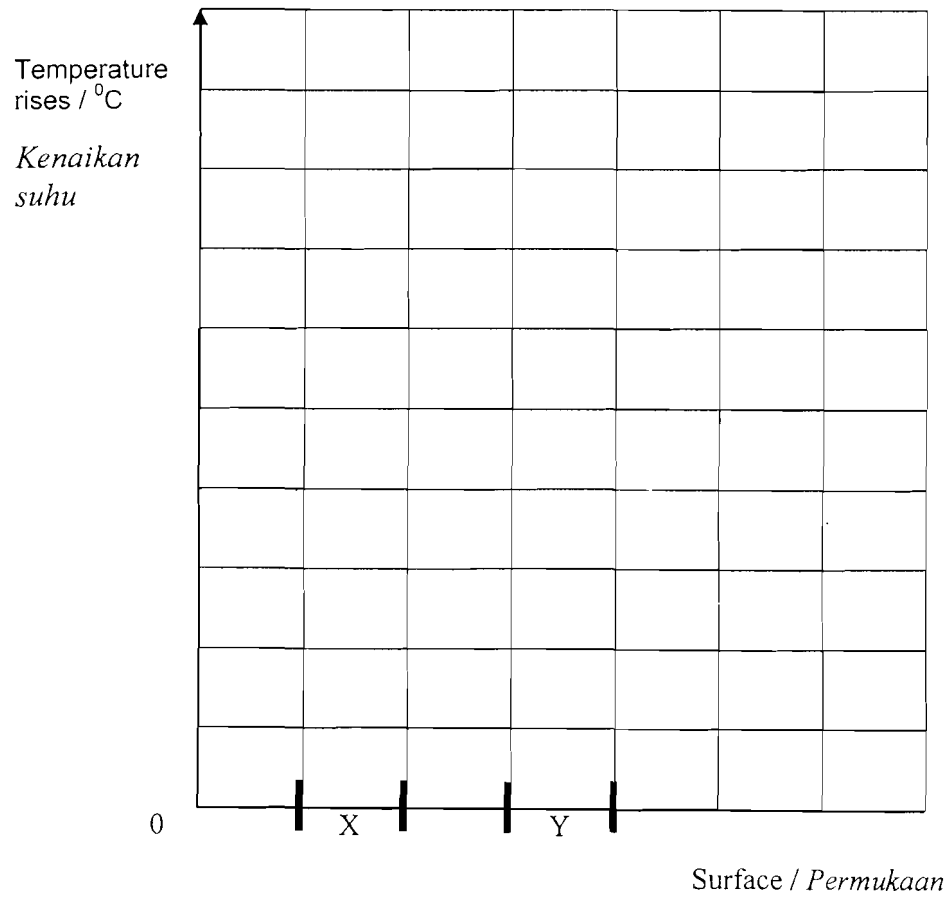
TABLE 8.4/Jadual 8.4

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Lihat sebelah
SULIT

(c) Based on the readings in Table 8.4, draw a bar chart to show the effect of the colour of a surface on the change in temperature.

Berdasarkan bacaan pada Jadual 8.4, lukis satu carta bar untuk menunjukkan kesan warna permukaan terhadap kenaikan suhu.



[2 marks]

!ihat sebelah
SULIT

(d) State the variables involved in this experiment.

Nyatakan pemboleh ubah yang terlibat dalam eksperimen ini.

Manipulated variable <i>Pemboleh ubah dimanipulasi</i>	
Responding variable <i>Pemboleh ubah bergerak balas</i>	
Controlled variable <i>Pemboleh ubah dikawal</i>	

[3 marks]

(e) Based on the experiment, state the relationship between the colour of the surface and the amount of heat absorbed.

Berdasarkan eksperimen ini, nyatakan hubungan diantara warna permukaan dan jumlah haba yang diserap.

.....
.....
.....

[1 mark]

(f) Based on this experiment, give your conclusion.

Berdasarkan eksperimen ini, berikan kesimpulan anda.

.....
.....

(1 mark)

END OF QUESTION PAPER

KERTAS SOALAN TAMAT

Lihat sebelah
SULIT

**55/2
SCIENCE
PMR
Ogos 2008**

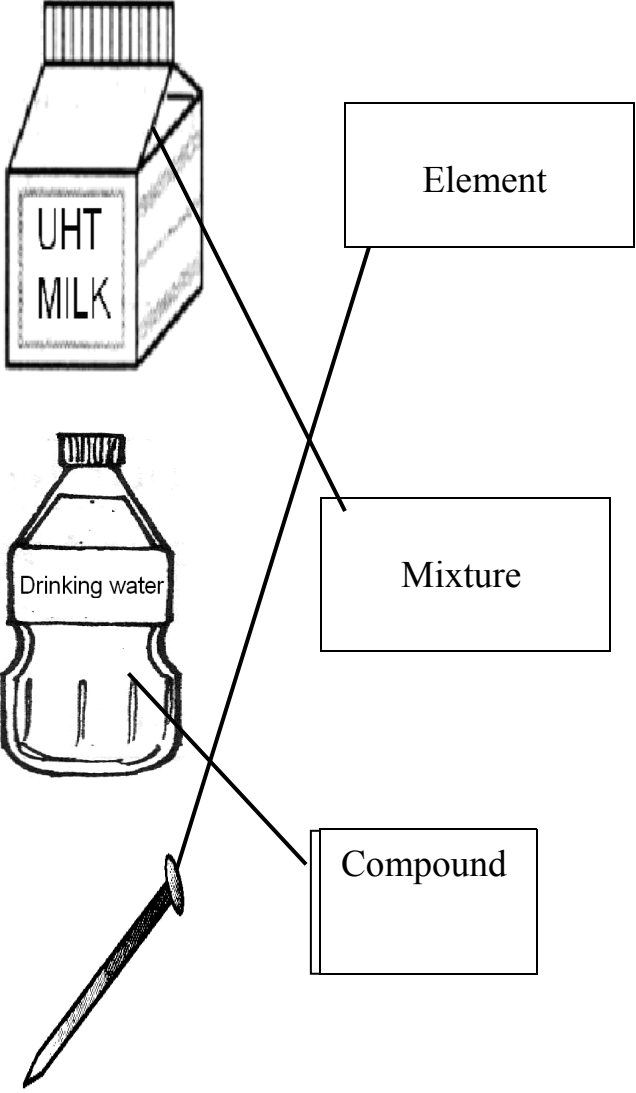
**PEPERIKSAAN PERCUBAAN
PENILAIAN MENENGAH RENDAH 2008**

**SCIENCE
KERTAS 2**

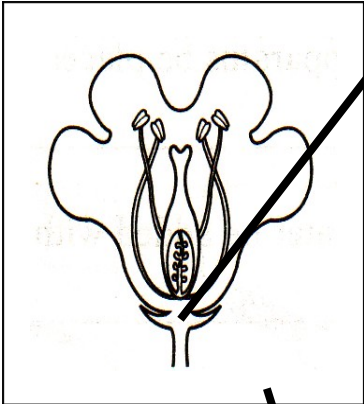
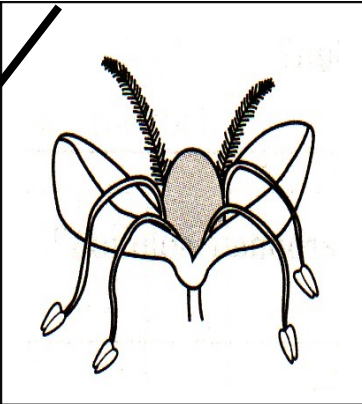
PERATURAN PEMARKAHAN

UNTUK KEGUNAAN PEMERIKSA SAHAJA

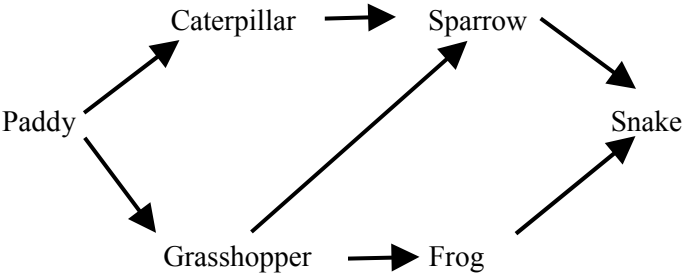
Peraturan pemarkahan ini mengandungi 11 halaman bercetak

Question No	Scheme	Marks	Total Marks
<p>1 (a)</p> <p>(b)</p>	 <p>UHT MILK</p> <p>Drinking water</p> <p>Element</p> <p>Mixture</p> <p>Compound</p> <div style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <p>Air Sulphur Silver Carbon dioxide [Udara] [Sulfur] [Perak] [Karbon dioksida]</p> </div>	3	

(c)	<ul style="list-style-type: none"> - Metal has high melting point while non-metal has low melting point. [<i>Logam mempunyai takat didih yang tinggi manakala bukan logam mempunyai takat didih yang rendah .</i>] - Metal is a good conductor of heat while non-metal is a bad conductor of heat. [<i>Logam adalah pengalir haba yang baik manakala bukan logam adalah pengalir haba yang lemah</i>] - Metal can be polished while non-metal cannot be polished . [<i>Logam boleh digilap manakala bukan logam tidak boleh digilap</i>] <p>(Accept any suitable answer)</p>	1	6
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Question No	Scheme	Marks	Total Marks
2 (a)	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Diagram 2.1 <i>Rajah 2.1</i></p> </div> <div style="text-align: center;">  <p>Diagram 2.2 <i>Rajah 2.2</i></p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">Wind <i>Angin</i></div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Insect <i>Serangga</i></div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Water <i>Air</i></div> </div>	2	

<p>(b)</p> <p>(i)</p>	<ul style="list-style-type: none"> - Has scented flower [<i>mempunyai bunga berbau wangi</i>] - Has colourful petals [<i>Mempunyai kelopak bunga yang berwarna –warni</i>] - Short stigma which is situated inside the flower . [<i>Stigma yang pendek dan terletak di dalam bunga</i>] - Short anther which is situated inside the flower [<i>Anter yang pendek dan terletak di dalam bunga</i>] - Big and sticky pollen grain [<i>Butir debunga besar dan melekit</i>] <p>(Accept any suitable answer)</p>	2	
<p>(ii)</p>	<ul style="list-style-type: none"> - Has long stigma which is hanging outside from the flower. [<i>Mempunyai stigma yang panjang dan tergantung keluar dari bunga</i>] - Has long anther which is hanging outside from the flower. [<i>Mempunyai anter yang panjang dan tergantung keluar dari bunga</i>] - Small, light and hairy pollen grain. [<i>Butir debungan kecil, ringan dan berbulu</i>] - Has unscented flower . [<i>Mempunyai bunga tidak berbau</i>] - Has dull flower. [<i>Mempunyai bunga tidak berwarna / berwarna pudar</i>] <p>(Accept any suitable answer)</p>	2	6

Question No	Scheme	Marks	Total Marks
3 (a)	 <pre> graph LR Paddy --> Caterpillar Paddy --> Grasshopper Caterpillar --> Sparrow Grasshopper --> Sparrow Grasshopper --> Frog Sparrow --> Snake Frog --> Snake </pre>	2	
(b)	Snake [Ular]	1	
(c) i	Grasshopper // Caterpillar // Sparrow [Belalang // Beluncas // Burung layang-layang]	1	
ii	Biological control [<i>Kawalan biologi</i>]	1	
(d)	The population of frog decrease . [<i>Populasi katak akan berkurangan</i>]	1	
(e)	Caterpillar and Grasshopper [<i>Beluncas dan belalang</i>] or Sparrow and frog. [<i>Burung layang-layang dan katak</i>]	1	
			7

Question No	Scheme	Marks	Total Marks
4			
(a)	Fractional distillation / <i>Penyulingan berperingkat</i>	1	
(b)	Has different boiling point / <i>Takat didih berbeza</i>	1	
(c)	Petroleum gas / <i>Gas petroleum</i>	1	
(d)	<p>1. Fraction S has more soot than fraction P <i>Pecahan S mempunyai lebih jelaga dari pecahan P</i></p> <p>2. Fraction S is more viscous than fraction P <i>Pecahan S lebih likat dari pecahan P</i></p> <p>3. Fraction S is darker color than fraction P <i>Pecahan S berwarna lebih gelap dari pecahan P</i></p> <p>4. Fraction S has higher boiling point than fraction P <i>Takat didih pecahan S tinggi dari pecahan P</i></p> <p>5. Fraction P is easier to burn than fraction S <i>Pecahan P mudah terbakar berbanding pecahan S</i></p> <p>Any two.</p>	1	
(e)	<p>1. Car pooling / <i>Kongsi kenderaan</i></p> <p>2. Using public transports / <i>Guna kenderaan awam</i></p> <p>3. Use alternative energy source / <i>Guna tenaga alternatif</i></p> <p>Accept any other suitable answers.</p>	1	
			6

Question No	Scheme	Marks	Total Marks
5 (a)	To absorb carbon dioxide [Untuk menyerap gas karbon dioksida]	1	7
(b)	To remove starch from the leaf // To destarch the leaf. [Untuk menyingkirkan kanji daripada daun]	1	
(c) i	Leaf from plant Q [Daun dari tumbuhan Q]	1	
ii	Plant Q is able to carry out photosynthesis in the presence of carbon dioxide. [Tumbuhan Q boleh melakukan proses fotosintesis dengan kehadiran karbon dioksida]	1	
(d)	<div style="display: flex; align-items: center; justify-content: center; gap: 20px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">Carbon dioxide [Karbon dioksid]</div> <div>+</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Water [Air]</div> <div style="text-align: center;"> $\xrightarrow[\text{Sunlight}]{\text{Chlorophyll}}$ <i>Klorofil</i> <i>Cahaya matahari</i> </div> </div> <div style="display: flex; align-items: center; justify-content: center; gap: 20px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">Glucose [Glukos]</div> <div>+</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Oxygen [Oksigen]</div> </div> <p>(4 correct = 3 marks) (3 correct = 2 marks) (2 correct = 1 mark) (1 correct = 0 mark)</p>	3	
6 (a)	Increase the voltage from 11 kV to 275 kV or 500 kV. [Meningkatkan voltan dari 11 kV ke 275 kV atau 500 kV.]	1	

<p>(b) i.</p>	<p>- By increasing the number of turns in coil S // By increasing the number of turns in secondary coil [<i>Meninggikan bilangan lilitan gegelung wayar S //</i> [<i>Meninggikan bilangan lilitan gegelung seku nder</i>]</p>		
<p>ii.</p>	<p style="text-align: center;">or</p> <p>- By reducing the number of turns in coil R // By reducing the number of turns in primer coil [<i>Merendahkan bilangan lilitan gegelung wayar R//</i> [<i>Merendahkan bilangan lilitan gegelung primer</i>]</p> <p>- By reducing the number of turns in coil S // By reducing the number of turns in secondary coil [<i>Merendahkan bilangan lilitan gegelung wayar S //</i> [<i>Merendahkan bilangan lilitan gegelung seku nder</i>]</p> <p style="text-align: center;">or</p> <p>- By increasing the number of turns in wire coil R // By increasing the number of turns in primary coil [<i>Meninggikan bilangan lilitan gegelung wayar R //</i> [<i>Meninggikan bilangan lilitan gegelung sekunder</i>]</p>	<p>1</p> <p>1</p>	<p>2</p>
<p>(c) i.</p>	<p>The electrical power supply in the country will not be affected. [<i>Bekalan kuasa elektrik ke seluruh Negara tidak terganggu</i>]</p>	<p>1</p>	
<p>ii.</p>	<p>The National Grid Network connects power stations at different places . [<i>Rangkaian Grid Kebangsaan menghubungkan stesen kuasa bersama pada tempat yang berbeza</i>]</p> <p>Accept any suitable answer.</p>	<p>1</p>	
<p>(d) i.</p>	<p>Bulb P [<i>Mentol P</i>]</p>	<p>1</p>	
<p>ii.</p>	<p>The number of turns in the secondary coil is less than the number of turns in the primary coil // The number of turns in primary coil is more than the number of turns in the secondary coil . [<i>Bilangan lilitan gegelung sekunder kurang daripada bilangan lilitan gegelung primer // Bilangan lilitan gegelung primer lebih banyak dari bilangan lilitan gegelung sekunder</i>]</p>	<p>1</p>	

iii.	The brightness of bulb Q increases. [<i>Kecerahan mentol Q bertambah</i>]	1	8
Accept any suitable answer			

Question No	Scheme	Marks	Marks
7			
(a)	P : Support by tendrils. [<i>Sokongan oleh sulu rpaut</i>]	1	
	Q : Support by thorns. [<i>Sokongan oleh duri</i>]	1	
	R : Support by stilt roots. [<i>Sokongan oleh akar lekap</i>]	1	
	S : Support by tendrils. [<i>Sokongan oleh sulur paut</i>]	1	4
(b)	Group 1 – With tendrils [<i>Mempunyai sulur paut</i>] P and S	2	
	Group 2 – Without tendrils [<i>Tanpa sulur paut</i>] Q and R	2	4
			8

Question No	Scheme	Marks	Marks
8			
(a)			
i.	The car in Situation B receives more heat than the car in Situation A. <i>Kereta dalam situasi B terima lebih haba dari kereta dalam Situation A.</i>	1	
ii.	Black // dark color surface is a better heat absorber than a white // bright color surface <i>Warna hitam // gelap adalah penyerap haba yang lebih baik dari warna putih // cerah.</i>	1	

iii.

The darker the color of the surface, the more heat is absorbed // The darker the colour of the surface the higher the temperature becomes. // The surface color affects the rate of heat absorption // The colour of the surface influences the rate of heat absorption // Change in temperature depends on the colour of the surface

[*Semakin gelap warna permukaan, semakin banyak haba dapat diserap // Semakin gelap warna permukaan, semakin tinggi suhu // // Warna permukaan mempengaruhi kadar penyerapan haba // Perubahan suhu bergantung kepada warna permukaan .*]

1

(b)

X	28.6	35.0	6.4
Y	28.6	60.0	31.4

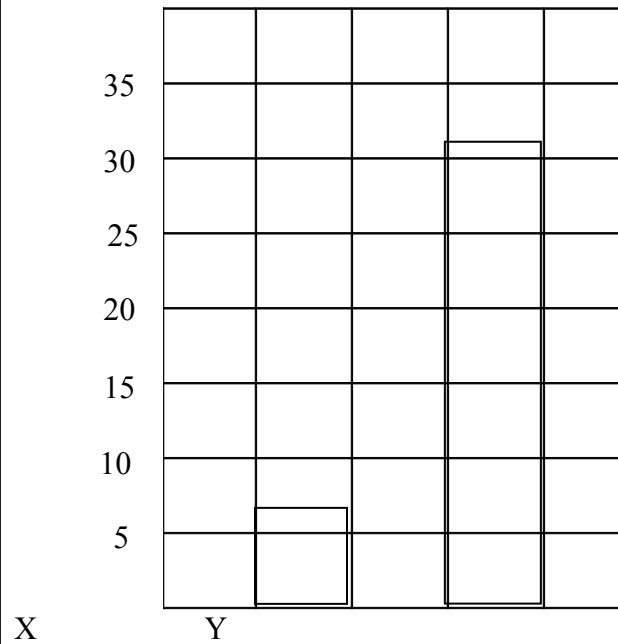
6 correct : 2 marks.

5/4/3 correct : 1 mark

2 or 1 correct ; 0 mark.

2

(c)



X

Y

Y axis scale : 1 mark

Bar height : 1 mark

2

(d)	<p>Manipulated variable : The colour of the surface [<i>Warna permukaan</i>]</p> <p>Responding variable : The reading of the thermometer // temperature [<i>Bacaan thermometer</i>]</p> <p>Controlled variable : Volume of water // Size of tin //Distance of Bunsen burner [<i>Isipadu air // Saiz tin // Jarak dari Bunsen Burner</i>]</p>	3	
(e)	<p>The amount of heat absorb depends on the colour of the surface // Different colour absorb different amount of heat // The darker the colour is, the more the heat is absorb . [<i>Jumlah haba yang diserap bergantung kepada warna permukaan</i>] // <i>Warna yang berbeza menyerap lebih banyak haba // Lebih gelap warna permukaan , lebih banyak haba diserap</i>]</p>	1	
(f)	<p>The surface color influences the amount of heat absorb // Change in temperature depends on the colour of the surface . [<i>Warna permukaan mempengaruhi jumlah haba yang diserap // Perubahan suhu bergantung kepada warna permukaan.</i>]</p>	1	12