



**MAJLIS PENGETUA SEKOLAH MALAYSIA (MPSM)
NEGERI SEMBILAN DARUL KHUSUS**

NAMA :

KELAS:

PROGRAM PENINGKATAN AKADEMIK TINGKATAN 5 TAHUN 2025

SAINS

1511/2

Kertas 2

Ogos – September 2025

2 ½ jam

2 jam 30 minit

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

1. *Tulis nama dan kelas di ruangan yang disediakan di bahagian atas muka surat ini.*
2. *Kertas soalan ini adalah dalam dwibahasa.*
3. *Soalan dalam bahasa Melayu mendahului soalan yang sepadan dalam bahasa Inggeris.*
4. *Calon dibenarkan menjawab keseluruhan atau sebahagian soalan sama ada dalam bahasa Melayu atau bahasa Inggeris.*
5. *Calon dikehendaki membaca maklumat di halaman belakang kertas soalan ini.*

Untuk Kegunaan Pemeriksa			
Bahagian	Soalan	Markah Penuh	Markah Diperoleh
A	1	5	
	2	5	
	3	5	
	4	5	
B	5	6	
	6	6	
	7	6	
	8	6	
	9	7	
	10	7	
C	11	10	
	12	12	
	13	12	
Jumlah			

Kertas soalan ini mengandungi 48 halaman bercetak.

[Lihat halaman sebelah

Bahagian A**[20 markah]****Jawab semua soalan.**

- 1 Enam orang murid dari tingkatan 4 Intelek melakukan aktiviti untuk mengkaji kadar denyutan nadi. Mereka diminta untuk mengambil bacaan kadar denyutan nadi dalam keadaan rehat dan berlari. Jadual 1.1 dan 1.2 menunjukkan bacaan kadar denyutan nadi bagi murid-murid tersebut.

Six students from form 4 Intelek were selected to carry out an activity to study the pulse rate. They were asked to record their pulse rate readings at rest and running. Tables 1.1 and 1.2 show the pulse rate of the students.

Jantina (Lelaki) Gender (Male)		
Murid Student	Kadar denyutan nadi (bpm) Pulse rate (bpm)	
	Rehat Rest	Berlari Running
Murid 1 Student 1	65	95
Murid 2 Student 2	63	90
Murid 3 Student 3	65	92

Jadual 1.1**Table 1.1**

Jantina (Perempuan) Gender (Female)		
Murid Student	Kadar denyutan nadi (bpm) Pulse rate (bpm)	
	Rehat Rest	Berlari Running
Murid 4 Student 4	77	110
Murid 5 Student 5	81	112
Murid 6 Student 6	80	114

Jadual 1.2**Table 1.2**

- (a) Aktiviti yang dijalankan merupakan satu penyiasatan yang adil.

The activities conducted is a fair investigation.

- (i) nyatakan **satu** faktor yang diubah selain jenis aktiviti fizikal.

state one factor that being changed other than type of physical activity.

- (ii) nyatakan **satu** cara bagaimana anda mengawal faktor yang dinyatakan di atas.

state one way how you control the factor mentioned above.

[2 markah]

[2 marks]

- (b) Nyatakan **satu** hipotesis bagi eksperimen ini.

State one hypothesis for this experiment.

[1 markah]

[1 mark]

[Lihat halaman sebelah]

- (c) Pernyataan berikut menunjukkan kesimpulan bagi eksperimen ini.

The following statement show the conclusion for this experiment.

Kadar denyutan nadi perempuan lebih tinggi dari kadar denyutan nadi lelaki.

The pulse rate of female is higher than male.

Berdasarkan pemerhatian anda dalam Jadual 1.1 dan Jadual 1.2, buktikan pernyataan itu.

Based on your observation in Table 1.1 and Table 1.2, prove that statement.

.....

.....

[1 markah]

[1 mark]

- (d) Nyatakan satu alat radas yang boleh digunakan untuk mengukur kadar denyutan nadi dengan tepat.

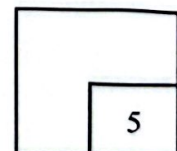
State one apparatus that can be used to measure the pulse rate accurately.

.....

[1 markah]

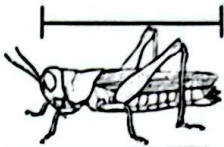
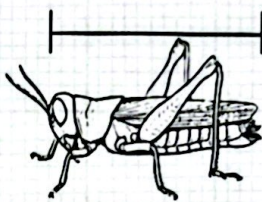
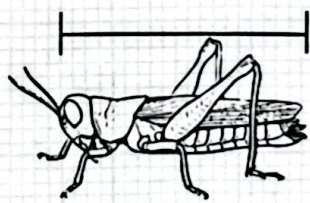
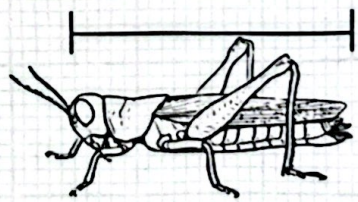
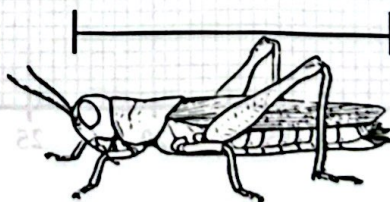
[1 mark]

Total
A1



2 Jadual 2 menunjukkan satu eksperimen untuk mengkaji lengkung pertumbuhan haiwan berangka luar. Seekor nimfa belalang diperhatikan selama sebulan.

Table 2 shows an experiment to study the growth curve of an exoskeleton animal. A grasshopper nymph is observed for a month.

Hari Day	Belalang Grasshopper	Panjang belalang (cm) Length of grasshopper (cm)
1 – 5		2.0
6 – 10		2.5
11 – 15		3.0
16 – 20		
21 – 25		4.0
26 – 30		4.5

Jadual 2
Table 2

[Lihat halaman sebelah

- (a) Ukur panjang belalang pada hari ke 16 – 20 dengan menggunakan pembaris. Tulis jawapan anda dalam Jadual 2.

Measure the length of the grasshopper on days 16 – 20 using a ruler. Write down your answer in Table 2.

[1 markah]

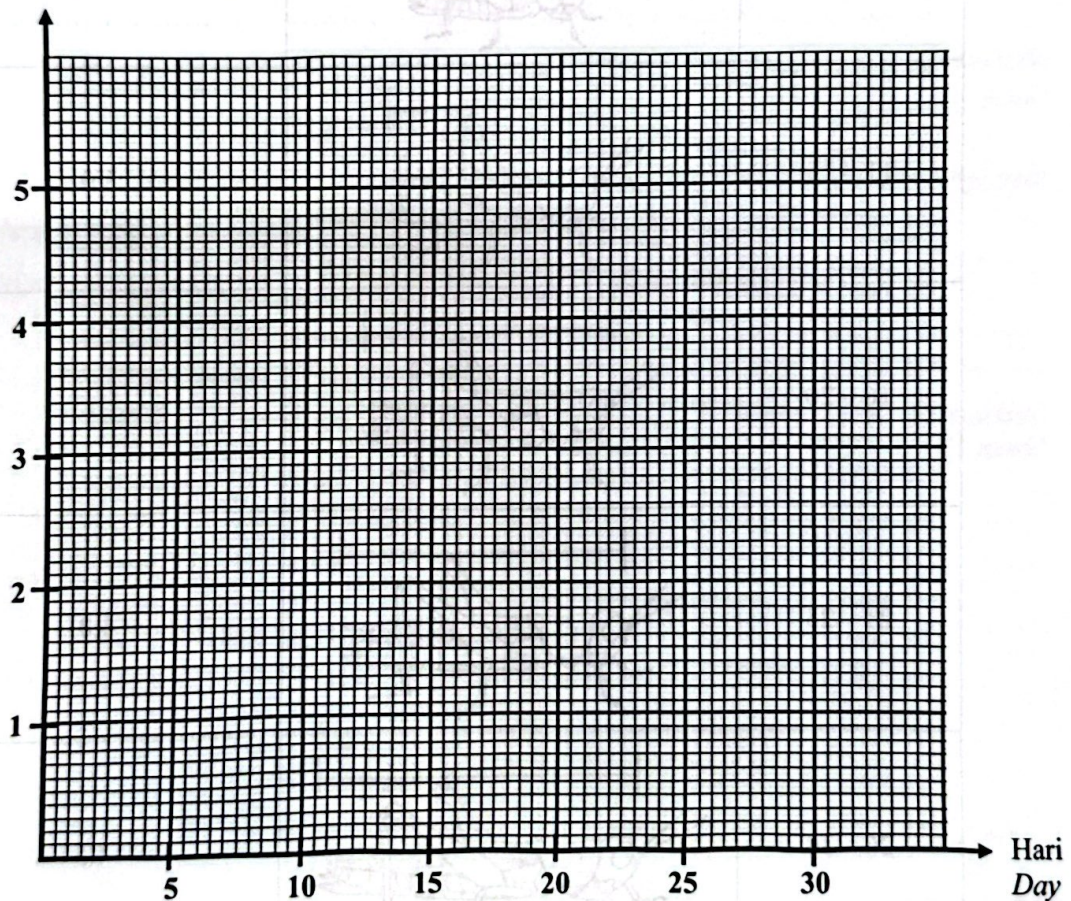
[1 mark]

- (b) Lukiskan graf lengkung pertumbuhan belalang.

Draw the growth curve of the grasshopper.

Panjang belalang (cm)

Length of grasshopper (cm)

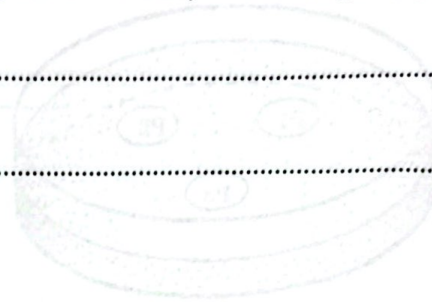


[2 markah]

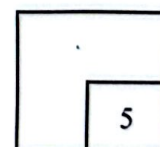
[2 marks]

- [1 mark]

- [1 mark]



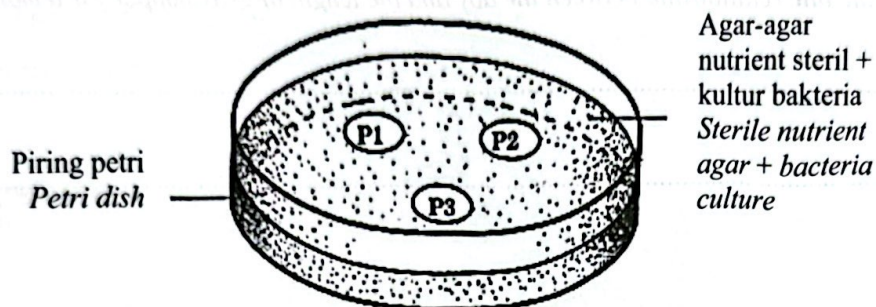
**Total
A2**



1511/2025 Hak cipta Majlis Pengetua Sekolah Malaysia (MPSM) Negeri Sembilan. Murni dan Sulit

- 3 Rajah 3 menunjukkan satu eksperimen yang dijalankan untuk mengkaji kesan tiga jenis antibiotik ke atas pertumbuhan bakteria. P1, P2 dan P3 adalah tiga jenis antibiotik yang berbeza diletakkan di atas cakera di permukaan agar-agar nutrien steril.

Diagram 3 shows an experiment conducted to study the effect of three types of antibiotics on bacterial growth. P1, P2 and P3 are three different types of antibiotics were placed on the discs on the surface of sterile nutrient agar.



Rajah 3
Diagram 3

Piring petri ditelangkupkan dan disimpan pada suhu 37 °C. Setelah dua hari, kawasan jernih terbentuk di sekeliling setiap cakera. Diameter kawasan jernih diukur dan direkodkan dalam Jadual 3.

The petri dish was inverted and kept at 37 °C. After two days, a clear region formed around each disc. The diameter of the clear region was measured and recorded in Table 3.

Jenis antibiotik <i>Type of antibiotic</i>	Diameter kawasan jernih (cm) <i>Diameter of the clear region (cm)</i>
P1	0.5
P2	1.5
P3	1.0

Jadual 3
Table 3

- (a) Berdasarkan Jadual 3, nyatakan satu pemerhatian bagi P2.

Based on Table 3, state one observation for P2.

.....

.....

[1 markah]
[1 mark]

- (b) Nyatakan inferens berdasarkan pemerhatian di 3(a).

State the inference based on the observation in 3(a).

.....

.....

[1 markah]
[1 mark]

- (c) Nyatakan faktor yang dikawal dalam eksperimen ini.

State the factor that is being controlled in this experiment.

[markah 1]
[mark 1]

.....

[1 markah]
[1 mark]

- (d) Berdasarkan eksperimen ini, nyatakan definisi secara operasi bagi antibiotik.

Based on this experiment, state the operational definition for antibiotic.

.....

.....

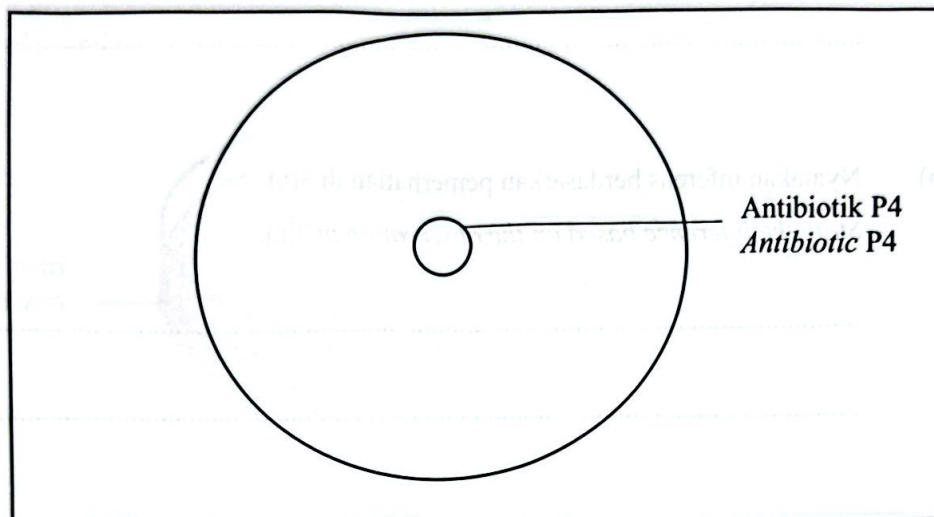
[1 markah]
[1 mark]



[Lihat halaman sebelah]

- (e) Lukis diameter kawasan jernih yang terbentuk jika antibiotik P4 adalah lebih berkesan daripada P2 dalam kotak yang disediakan.

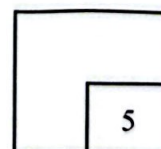
Draw the diameter of the clear region formed if antibiotic P4 is more effective than P2 in the box provided.



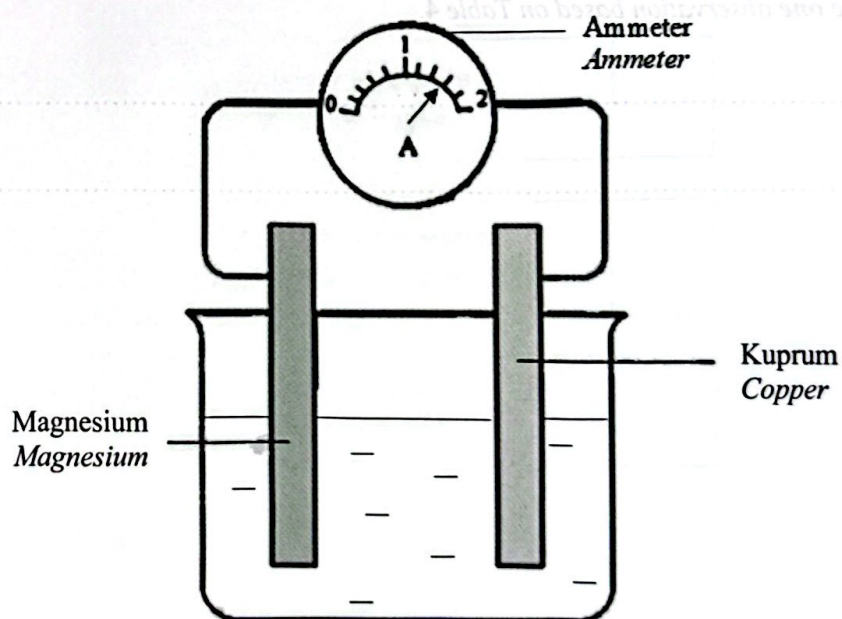
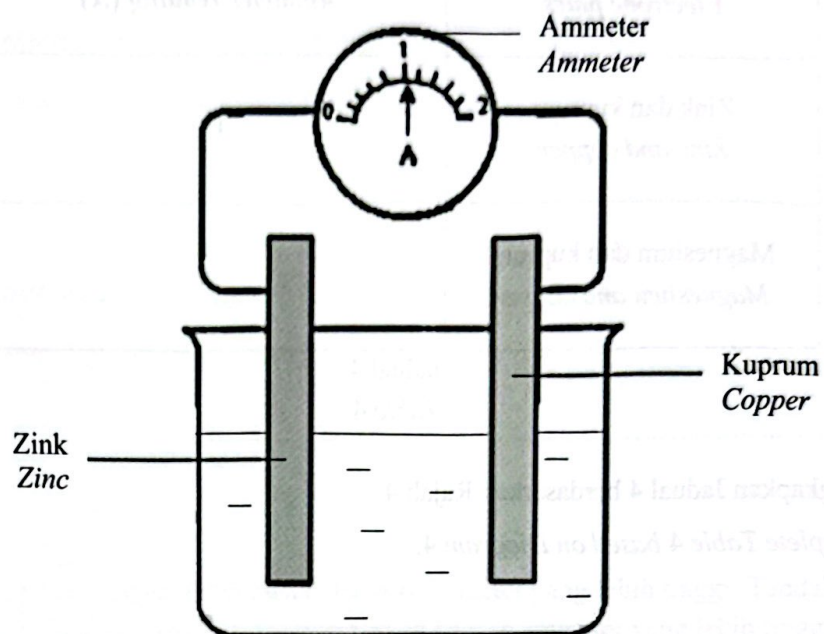
[1 markah]

[1 mark]

Total
A3



- 4 Rajah 4 menunjukkan sel kimia ringkas.
Diagram 4 shows a simple chemical cell.



Rajah 4
Diagram 4

[Lihat halaman sebelah]

Pasangan elektrod <i>Electrode pairs</i>	Bacaan ammeter (A) <i>Ammeter reading (A)</i>
Zink dan kuprum <i>Zinc and copper</i>	1.0
Magnesium dan kuprum <i>Magnesium and copper</i>	

Jadual 4
Table 4

- (a) Lengkapkan Jadual 4 berdasarkan Rajah 4.
Complete Table 4 based on Diagram 4.

[1 markah]
[1 mark]

- (b) Berikan satu pemerhatian berdasarkan Jadual 4.
Give one observation based on Table 4.

[1 markah]
[1 mark]

- (c) Berdasarkan Rajah 4,
Based on Diagram 4,

- (i) nyatakan faktor yang diperhatikan.

state factor that is being observe.

.....

- (ii) nyatakan cara mengawal faktor di (c)(i) .

state way to control factor in (c)(i).

.....

[2 markah]

[2 marks]

- (d) Seorang pelajar ingin mendapatkan bacaan ammeter yang lebih tinggi. Tandakan (✓) bagi pasangan elektrod yang dapat menghasilkan bacaan ammeter yang lebih tinggi.

A student wants to get a higher reading for the ammeter. Tick (✓) for electrode pairs that can produce a higher ammeter reading.

Plumbum dan kuprum <i>Lead and copper</i>	
--	--

Magnesium dan argentum <i>Magnesium and argentum</i>	
---	--

Zink dan ferum <i>Zinc and ferum</i>	
---	--

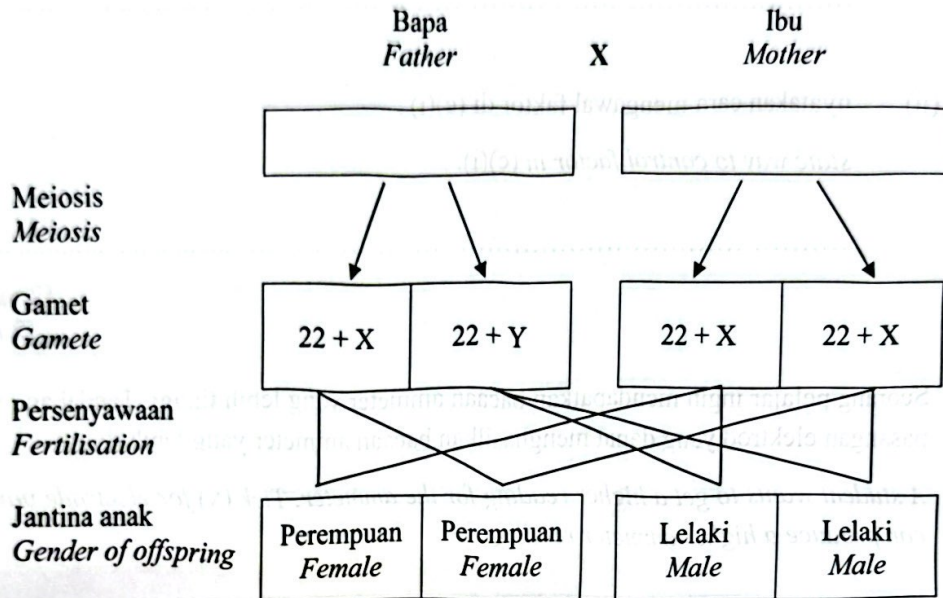
[1 markah]

[1 mark]

[Lihat halaman sebelah]

Bahagian B
[38 markah]
Jawab semua soalan.

- 5 Rajah 5.1 menunjukkan rajah skema penentuan jantina anak.
Diagram 5.1 shows the schematic diagram of determination of an offspring.



Rajah 5.1
 Diagram 5.1

- (a) Lengkapkan Rajah 5.1.
Complete Diagram 5.1.

[2 markah]
 [2 marks]

- (b) Berdasarkan Rajah 5.1,
 (i) nyatakan kandungan kromosom dalam sperma.
state the chromosome content in sperm.

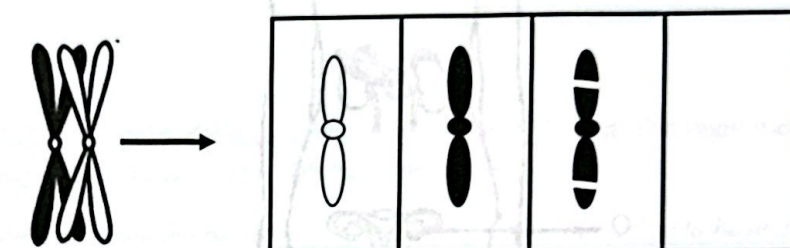
[1 markah]
 [1 mark]

- (ii) berapakah kebarangkalian mendapat anak perempuan?
what is the probability of having a baby girl?

[1 markah]

[1 mark]

- (c) Rajah 5.2 menunjukkan suatu proses yang terjadi semasa persenyawaan.
Diagram 5.2 shows a process that occurs during fertilisation.



Kromosom
Chromosome

Rajah 5.2
Diagram 5.2

- (i) Lengkapkan Rajah 5.2.
Complete Diagram 5.2.

[1 markah]

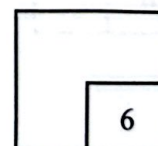
[1 marks]

- (ii) Apakah kepentingan proses pada Rajah 5.2 kepada manusia?
What is the importance of the process in Diagram 5.2 to human?

[1 markah]

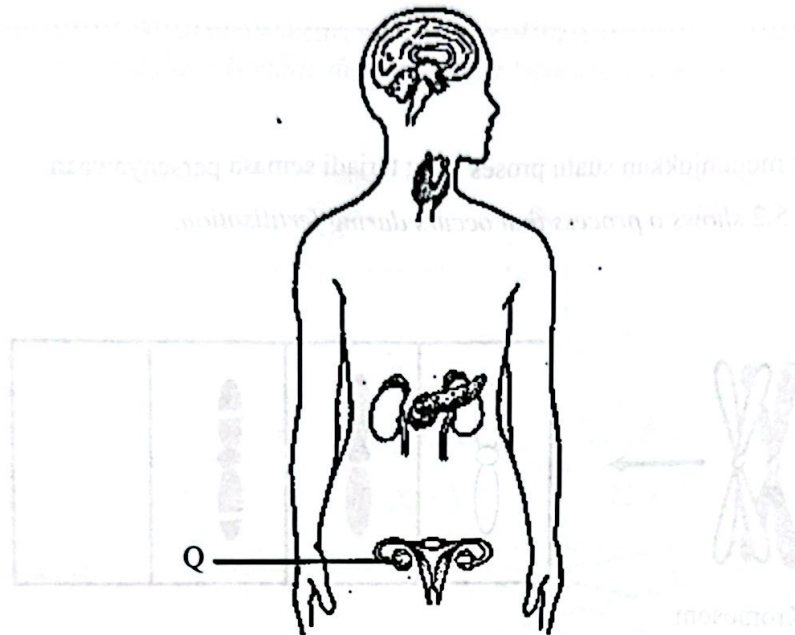
[1 marks]

Total
 B5



[Lihat halaman sebelah]

- 6 Rajah 6.1 menunjukkan sistem endokrin seorang wanita.
Diagram 6.1 shows a women's endocrine system.



Rajah 6.1
Diagram 6.1

- (a) Berdasarkan Rajah 6.1,
Based on Diagram 6.1,

- (i) berikan **satu** hormon yang dirembeskan oleh kelenjar Q.
*give **one** hormone that is secreted by gland Q.*

.....

- (ii) nyatakan **satu** fungsi bagi hormon yang dinyatakan dalam soalan 6 (a)(i).
*state **one** function of the hormone mentioned in question 6 (a)(i).*

.....

[2 markah]

[2 marks]

- (b) Wanita tersebut telah mengidap penyakit kanser di kelenjar Q.
Terangkan kemungkinan yang akan berlaku pada wanita tersebut.

The woman has been diagnosed with cancer in gland Q.

Explain the possible effects that may occur to that woman.

.....

.....

.....

[2 markah]

[2 marks]

- (c) Seorang wanita telah didiagnos mengalami sindrom Turner. Dia ingin mendapatkan seorang cahaya mata kerana telah lama berkahwin.

A woman has been diagnosed with Turner syndrome. She wishes to have a child as she has been married for a long time.

Adakah impiannya akan tercapai? Terangkan jawapan anda.

Will her dream come true? Explain your answer.

.....

.....

.....

[2 markah]

[2 marks]

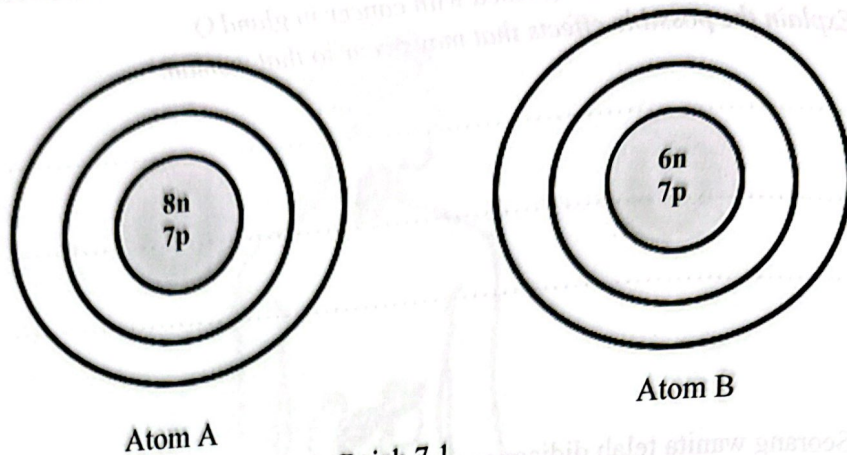
Total
B6

6

[Lihat halaman sebelah]

SULIT

- 7 Rajah 7.1 menunjukkan dua atom isotop yang tidak lengkap.
 Diagram 7.1 shows two incomplete isotopes atom.



Rajah 7.1
 Diagram 7.1

- (a) Berdasarkan Rajah 7.1,
 Based on Diagram 7.1,

- (i) Berapakah elektron yang terdapat dalam atom A?
 How many electrons are there in atom A?

.....

- (ii) lukiskan elektron untuk atom B.
 draw the electrons for atom B.

- (iii) buktikan atom A dan atom B adalah isotop.
 prove atom A and atom B are isotopes.

.....

.....

[3 markah]
 [3 marks]

- b) Unsur C mempunyai nombor proton 11. Nyatakan kumpulan bagi unsur C.
 Element C have proton number of 11. State the group for element C.

[1 markah]

[1 mark]

- (c) Rajah 7.2 menunjukkan buah yang dieksport dari negara Y.
 Diagram 7.2 shows fruit that have been export from country Y.



Rajah 7.2
 Diagram 7.2

Pada pendapat anda, adakah makanan yang diawet menggunakan sinaran radioaktif selamat dimakan.

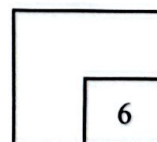
Jelaskan jawapan anda.

*In your opinion, is food preserved using radioactive radiation safe to eat?
 Explain your answer.*

[2 markah]

[2 marks]

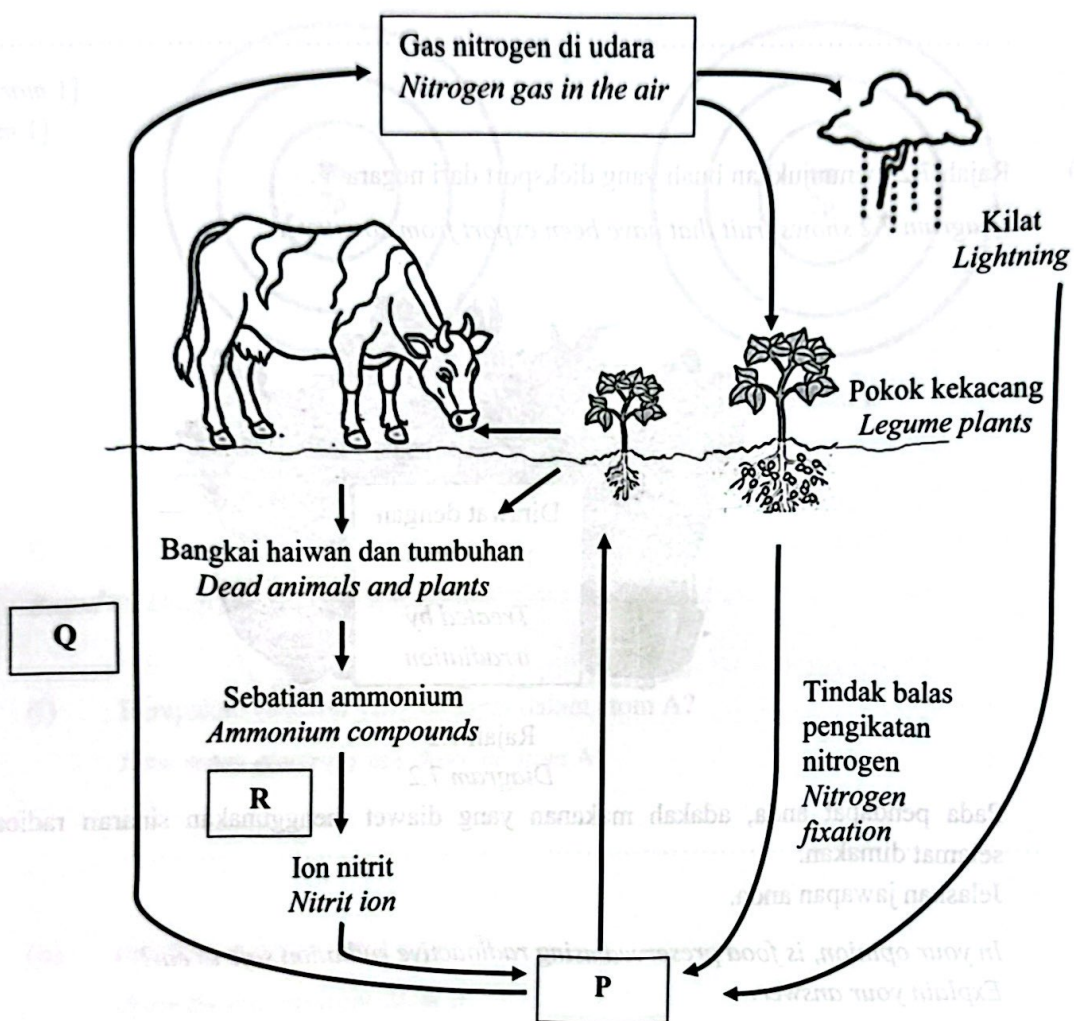
Total
 B7



[Lihat halaman sebelah]

8 Rajah 8.1 menunjukkan sebahagian daripada kitar nitrogen.

Diagram 8.1 shows part of the nitrogen cycle.



Rajah 8.1
Diagram 8.1

- (a) Berdasarkan Rajah 8.1,
Based on Diagram 8.1,

- (i) namakan P.
name P.

.....

- (ii) bandingkan Q dan R.
compare Q and R.

.....

.....

[2 markah]

[2 marks]

- (b) Negara M mempunyai beberapa buah gunung berapi tetapi ia mempunyai tanah yang subur.
Terangkan bagaimana kehadiran gunung berapi membantu menambah kesuburan tanah di negara tersebut?

Country M has several volcanoes but it has fertile land.

Explain how the presence of volcanoes helps to increase soil fertility in the country?

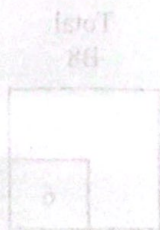
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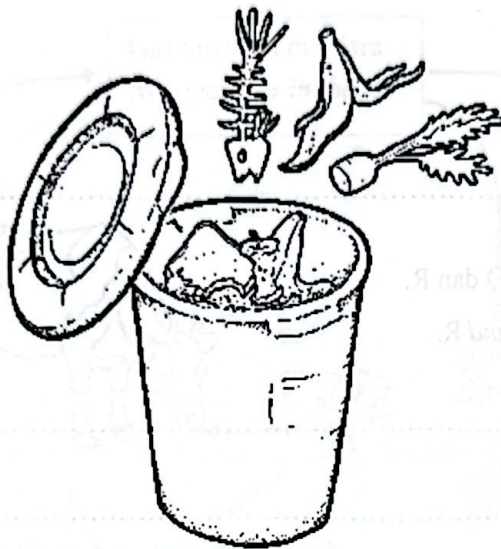
[2 markah]

[2 marks]



[Lihat halaman sebelah]

- (c) Rajah 8.2 menunjukkan sisa makanan.
Diagram 8.2 shows food waste.



Rajah 8.2
Diagram 8.2

Seorang suri rumah mencampurkan sisa makanan tersebut ke dalam tanah semasa melakukan aktiviti berkebun.

Wajarkan tindakannya itu.

A housewife mixes the food waste into the soil while doing gardening activity.

Justify her actions.

[2 markah]

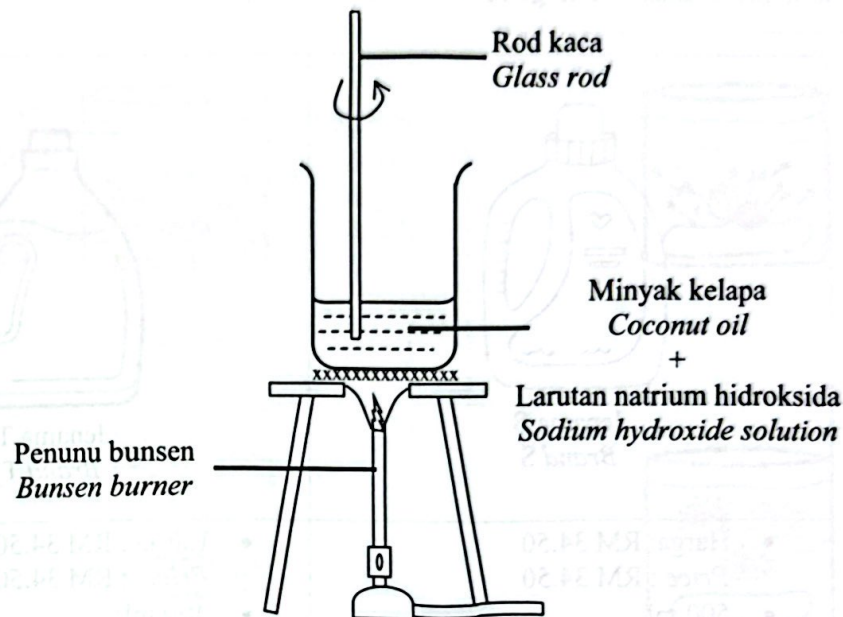
[2 marks]

Total
B8

	6

- 9 Rajah 9.1 menunjukkan proses penghasilan sabun.

Diagram 9.1 shows the process of soap production.



Rajah 9.1
Diagram 9.1

- (a) Berdasarkan Rajah 9.1,

Based on Diagram 9.1,

- (i) namakan proses penghasilan sabun.

name the process of soap production.

.....

- (ii) hasil eksperimen ini diuji dengan kertas litmus merah, didapati ianya bertukar ke warna biru. Apakah kesimpulan yang boleh dibuat?

The result of this experiment is tested with red litmus paper, it was found to turn blue. What conclusion can be made?

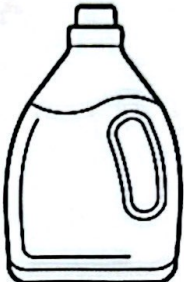
.....

[2 markah]
[2 marks]

[Lihat halaman sebelah

- (b) Seorang wanita ingin membasuh pakaiannya yang telah dikotori oleh mentega. Rajah 9.2 menunjukkan dua jenama pencuci pakaian yang terdapat di pasaraya.

A woman wants to wash her clothes that have been soiled with butter. Diagram 9.2 shows two brands of detergents available on the super market.

 Jenama S Brand S	 Jenama T Brand T
• Harga: RM 34.50 Price : RM 34.50 • 500 ml • Tidak berbau Odorless • Mengandungi enzim lipase Contains lipase enzymes	• Harga : RM 34.50 Price : RM 34.50 • 400 ml • Berbau wangi Fragrant • Tidak mengandungi enzim Does not contain enzymes

Rajah 9.2

Diagram 9.2

Bantu wanita tersebut untuk memilih jenama pencuci pakaian yang sesuai. Wajarkan.

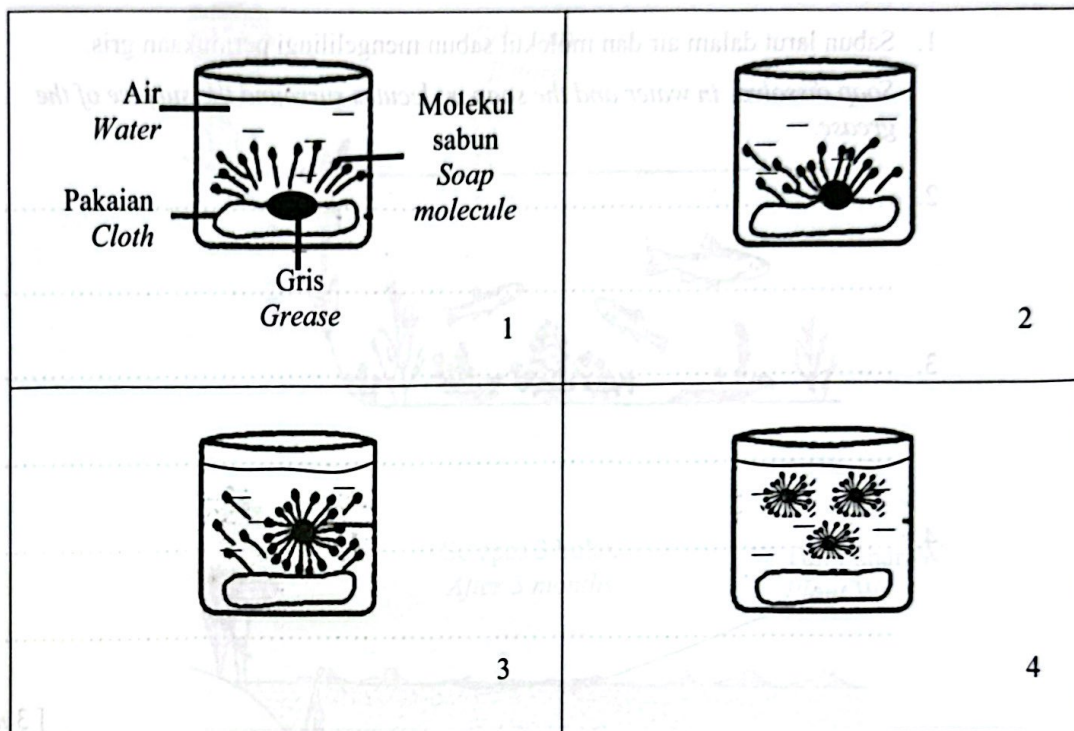
Help the woman to choose the appropriate brand of detergent. Justify.

[2 markah]

[2 marks]



- (c) Sabun digunakan untuk membersihkan pakaian yang kotor. Anda telah mempelajari proses berkaitan tindakan pencucian sabun semasa pembelajaran sains di dalam kelas.
Soap is used to clean dirty clothes. You have learned about the process related to the cleansing action of soap during science lessons in class.



Rajah 9.2
Diagram 9.2

[Lihat halaman sebelah

Berdasarkan Rajah 9.2 terangkan tindakan pencucian sabun pada pakaian yang telah dikotori oleh gris kepada rakan sekelas anda.

Based on Diagram 9.2, explain the cleansing action of soap on clothes that have been stained with grease to your classmate.

1. Sabun larut dalam air dan molekul sabun mengelilingi permukaan gris.

Soap dissolves in water and the soap molecules surround the surface of the grease.

2.

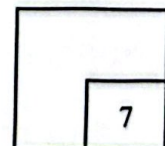
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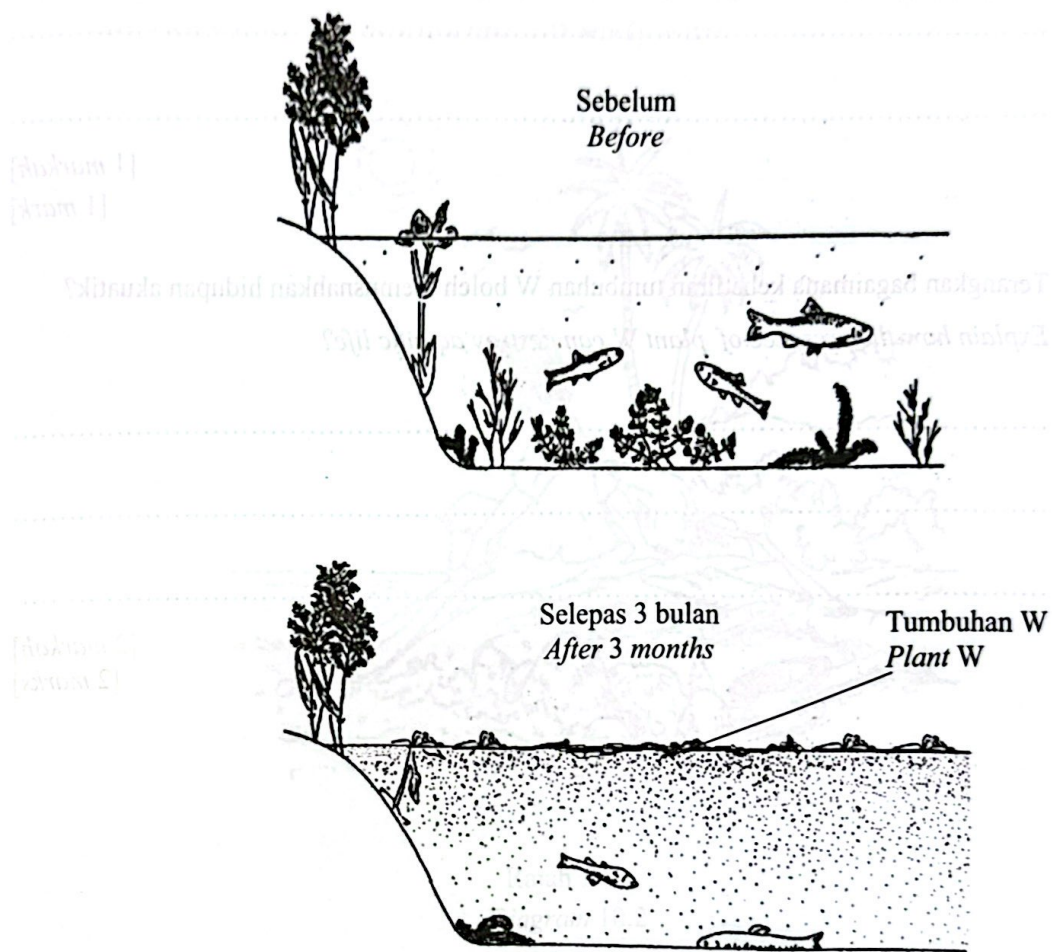
[3 markah]

[3 marks]

Total
B9



- 10 Rajah 10.1 menunjukkan satu fenomena yang berlaku kesan daripada pencemaran air.
Diagram 10.1 shows a phenomenon that occurs due to the water pollution.



Rajah 10.1
Diagram 10.1

- (a) Namakan fenomena itu.
Name the phenomenon.

[1 markah]

[1 mark]

[Lihat halaman sebelah]

- (b) Apakah yang menyebabkan fenomena ini berlaku?

What cause this phenomenon occur?

.....

.....

[1 markah]

[1 mark]

- (c) Terangkan bagaimana kehadiran tumbuhan W boleh memusnahkan hidupan akuatik?

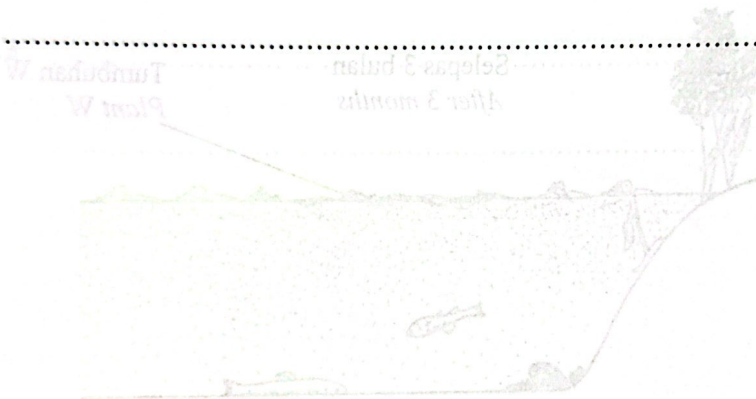
Explain how the presence of plant W can destroy aquatic life?

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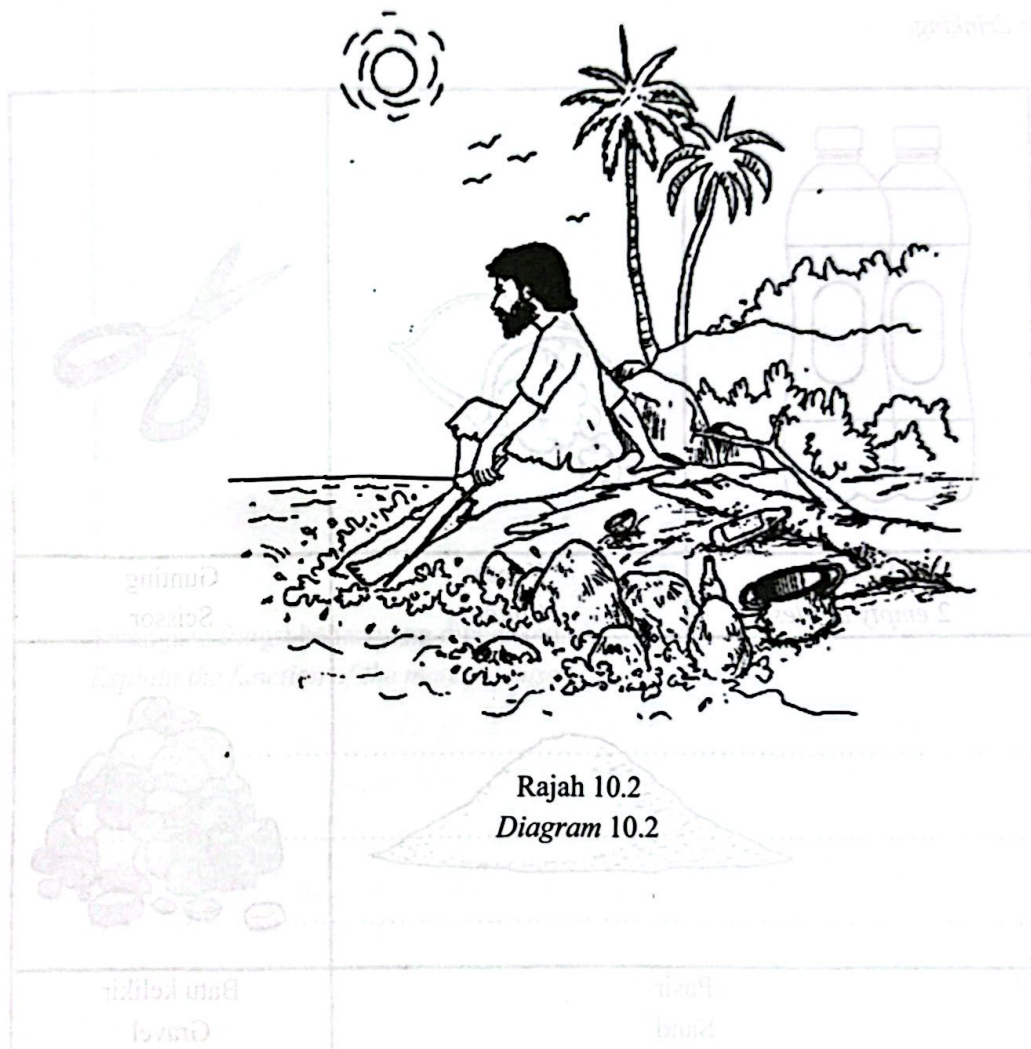
[2 markah]

[2 marks]



- (d) Rajah 10.2 menunjukkan seorang lelaki tersesat di dalam hutan. Selepas seharian mencari sumber air, dia terjumpa sebuah tasik yang airnya keruh.

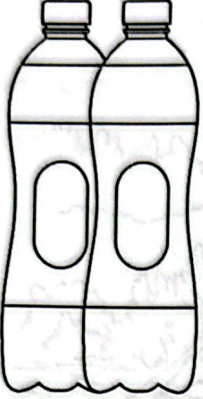
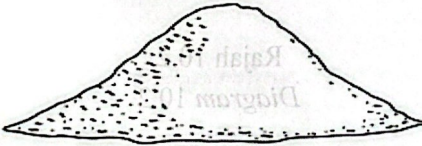
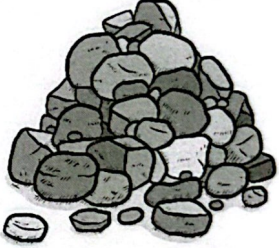
Diagram 10.2 shows a man who got lost in the forest. After a whole day of searching for a water source, he came across a lake with murky water.



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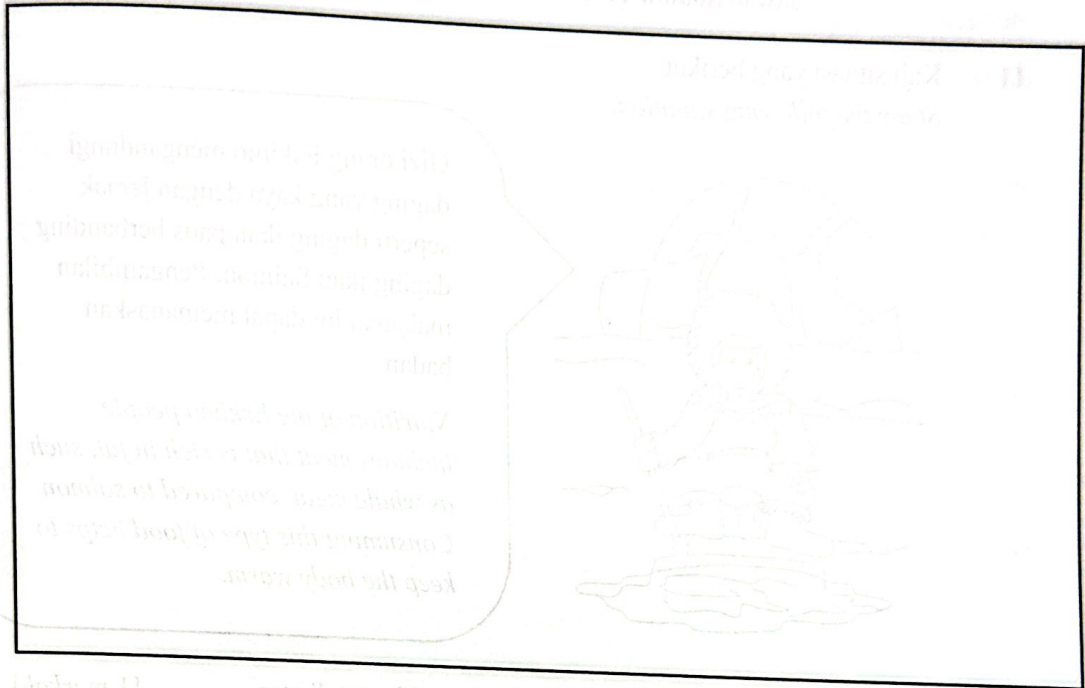
Dengan menggunakan bahan-bahan dalam Rajah 10.3, lakar, label dan terangkan fungsi bahan yang digunakan untuk menghasilkan satu alat menapis air supaya lelaki tersebut mendapat air yang jernih untuk diminum.

Using materials shown in Diagram 10.3, draw, label and explain the function of the materials used to create a water filtration device so that the man can obtain clean water for drinking.

		
2 botol kosong 2 empty bottles	Kapas Cotton	Gunting Scissor
		
Pasir Sand		Batu kelikir Gravel

Rajah 10.3
Diagram 10.3

Lakar dan label alat untuk menapis air dalam ruang yang disediakan.
Draw and label a water filtration device in the space provided.



Terangkan fungsi bahan yang digunakan.
Explain the function of the materials used.

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Bahagian C

[22 markah]

Jawab Soalan 11 dan sama ada Soalan 12 atau Soalan 13

- 11 Kaji situasi yang berikut.
Study the following situation.



Gizi orang Eskimo mengandungi daging yang kaya dengan lemak seperti daging ikan paus berbanding daging ikan Salmon. Pengambilan makanan ini dapat memanaskan badan.

Nutrition of the Eskimo people includes meat that is rich in fat, such as whale meat, compared to salmon. Consuming this type of food helps to keep the body warm.

- (a) Nyatakan satu pernyataan masalah daripada maklumat di atas. [1 markah]
State one problem statement from the above information. [1 mark]
- (b) Cadangkan satu hipotesis untuk menyiasat pernyataan di atas. [1 markah]
Suggest one hypothesis to investigate the above statement. [1 mark]
- (c) Berdasarkan situasi yang diberi, reka bentuk satu eksperimen makmal untuk menguji hipotesis anda dengan menggunakan 1 gram ikan bilis, 1 gram kacang tanah, 20 ml air suling, kaki retort, jarum tenggek, plastisin, kapas, tabung didih dan satu radas lain.
Based on the given situation, design a laboratory experiment to test your hypothesis using 1 gram of anchovies, 1 gram of peanuts, 20 ml of distilled water, a retort stand, a needle, plasticine, cotton wool, a boiling tube and one other apparatus.



Huraian anda hendaklah mengandungi aspek berikut:

Your description should include the following criteria:

(i) Tujuan eksperimen [1 markah]

Aim of the experiment [1 mark]

(ii) Pemboleh ubah yang dimalarkan dan cara mengawal [2 markah]

Constant variable and way to control [2 marks]

(iii) Prosedur atau kaedah [4 markah]

Procedure or method [4 marks]

(d) Langkah berjaga-jaga semasa menjalankan eksperimen. [1 markah]

Precautionary step while carrying out the experiment. [1 mark]

[Lihat halaman sebelah]

1. (1 mark) [1 mark]

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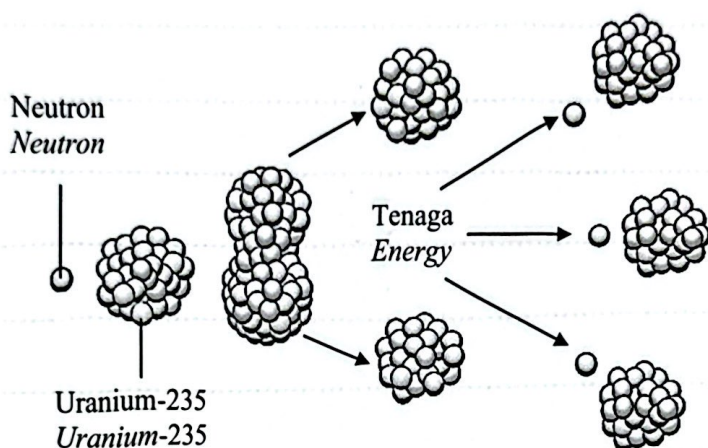
100. (1 mark) [1 mark]

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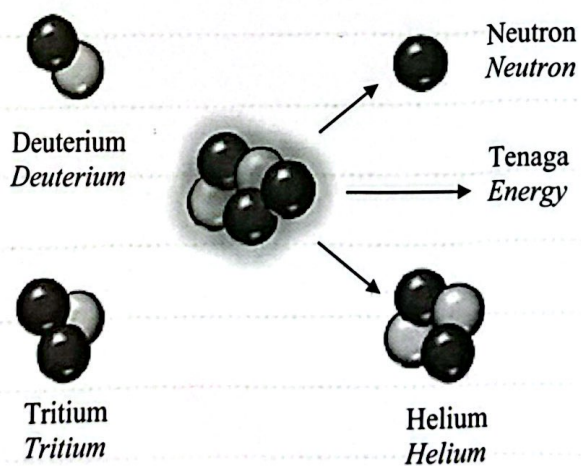
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12 Rajah 12 menunjukkan dua proses penghasilan suatu tenaga alternatif.

Diagram 12 shows two processes of generating an alternative energy.



Proses S
Process S



Proses T
Process T

Rajah 12
Diagram 12

- (a) Namakan Proses S dan Proses T. [2 markah]
Name Process S and Process T. [2 marks]
- (b) Terangkan tindak balas nuklear yang berlaku dalam Proses S. [2 markah]
Explain the nuclear reaction that occur in Process S. [2 marks]
- (c) Impak ujian nuklear memberikan kesan somatik dan kesan genetik kepada manusia. Jadual 5 menunjukkan kesan penyebaran radiasi ujian nuklear kepada penduduk di lokasi R dan S.

The impact of nuclear test has somatic and genetic effects on human.

Table 5 shows the effects of nuclear test radiation spread on residents at location R and S.

Lokasi <i>Location</i>	Kesan penyebaran radiasi kepada penduduk <i>Effects of radiation spread on residents</i>
R	• Loya <i>Nausea</i> • Leukimia <i>Leukimia</i> • Mutasi sel <i>Cell mutation</i> • Kanser <i>Cancer</i>
S	• Keletihan <i>Fatigue</i> • Katarak <i>Cataract</i> • Kanser <i>Cancer</i>

Jadual 5

Table 5

Berdasarkan Jadual 5, banding dan bezakan impak ujian nuklear bagi lokasi R dan S.

Based on Table 5, compare and contrast the impacts of nuclear test for location R and S.

[4 markah]

[4 marks]

[Lihat halaman sebelah]

- (a) Namakan Proses S dan Proses T.
Name Process S and Process T. [2 markah]
[2 marks]
- (b) Terangkan tindak balas nuklear yang berlaku dalam Proses S.
Explain the nuclear reaction that occur in Process S. [2 markah]
[2 marks]
- (c) Impak ujian nuklear memberikan kesan somatik dan kesan genetik kepada manusia.
Jadual 5 menunjukkan kesan penyebaran radiasi ujian nuklear kepada penduduk di lokasi R dan S.

The impact of nuclear test has somatic and genetic effects on human.
Table 5 shows the effects of nuclear test radiation spread on residents at location R and S.

Lokasi Location	Kesan penyebaran radiasi kepada penduduk Effects of radiation spread on residents
R	- Loya Nausea - Leukimia Leukimia - Mutasi sel Cell mutation - Kanser Cancer
S	- Keletihan Fatigue - Katarak Cataract - Kanser Cancer

Jadual 5

Table 5

Berdasarkan Jadual 5, banding dan bezakan impak ujian nuklear bagi lokasi R dan S.

Based on Table 5, compare and contrast the impacts of nuclear test for location R and S.

[4 markah]

[4 marks]

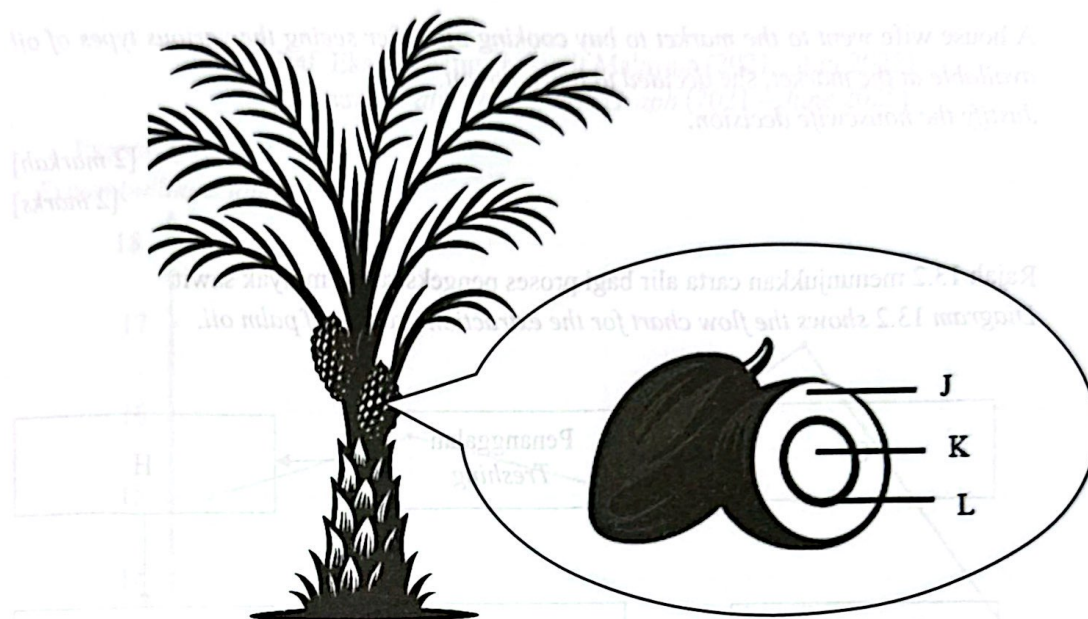
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[illegible]

- 13 Rajah 13.1 menunjukkan pokok buah kelapa sawit.

Diagram 13.1 shows an oil palm tree.



Rajah 13.1

Diagram 13.1

- (a) Berdasarkan rajah, namakan bahagian buah kelapa sawit yang menghasilkan,

Based on the diagram, name the part of the oil palm fruit that produces,

- (i) minyak berkualiti tinggi
high-quality oil

- (ii) minyak yang banyak
large quantity of oil

[2 markah]

[2 marks]

[Lihat halaman sebelah]

- (b) Seorang suri rumah ke pasar untuk membeli minyak masak. Setelah melihat pelbagai jenis minyak yang terdapat di pasar raya, dia memutuskan untuk membeli minyak sawit. Wajarkan tindakan suri rumah tersebut.

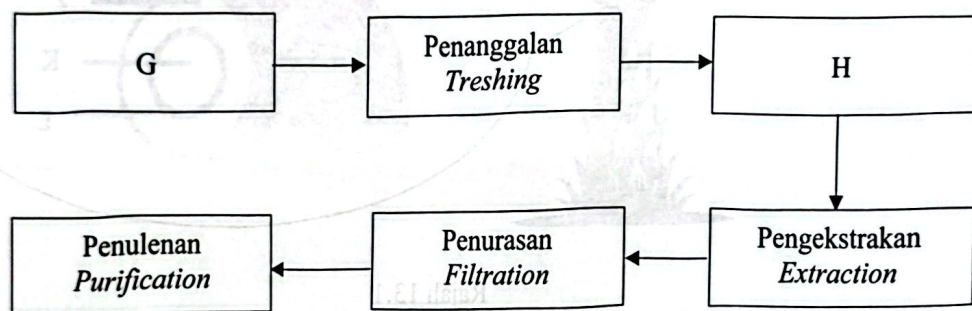
A house wife went to the market to buy cooking oil. After seeing the various types of oil available at the market, she decided to buy palm oil.

Justify the housewife decision.

[2 markah]

[2 marks]

- (c) Rajah 13.2 menunjukkan carta alir bagi proses pengekstrakan minyak sawit.
Diagram 13.2 shows the flow chart for the extraction process of palm oil.



Rajah 13.2
Diagram 13.2

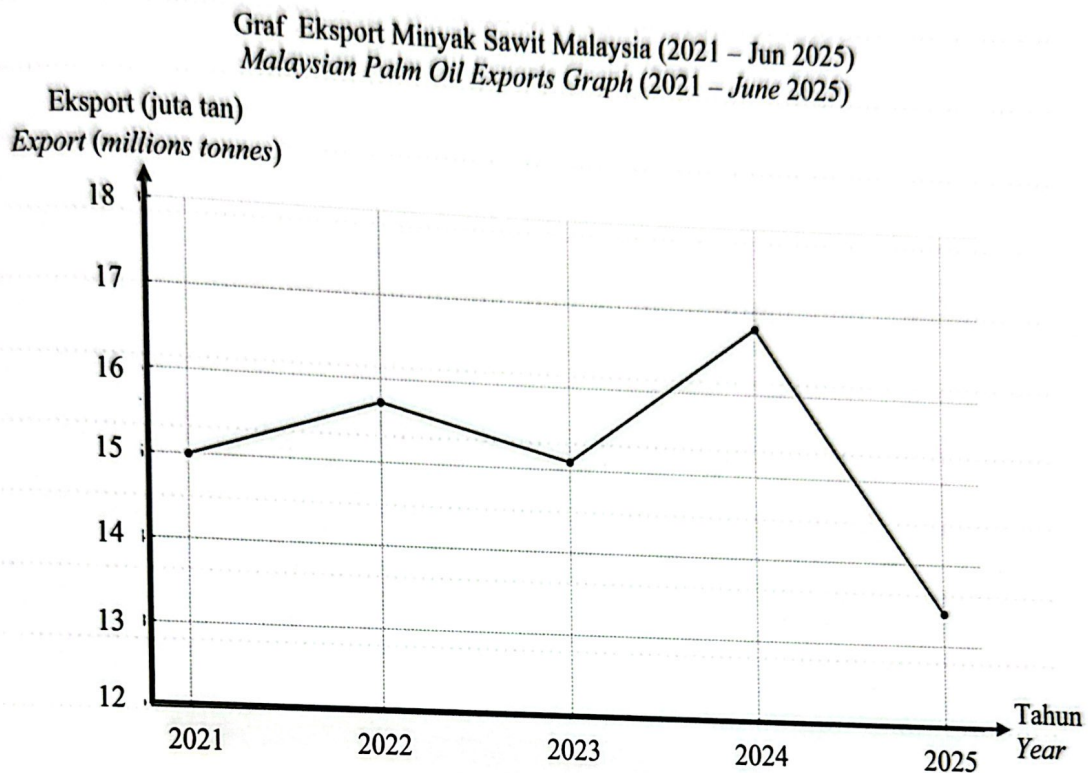
Namakan dan berikan fungsi proses G dan H.
Name and give the function for process G and H.

[4 markah]

[4 marks]

- (d) Rajah 13.3 menunjukkan jumlah eksport minyak sawit Malaysia dari tahun 2021 hingga Jun 2025.

Diagram 13.3 shows the total palm oil exports of Malaysia from 2021 to June 2025.



Lembaga Minyak Sawit Malaysia
Malaysian Palm Oil Board

Rajah 13.3
Diagram 13.3

Huraikan pola eksport minyak sawit Malaysia. Pada pendapat anda mengapakah berlakunya penurunan eksport minyak sawit Malaysia.

Describe the pattern of Malaysia's palm oil exports. In your opinion, why has there been a decline in Malaysia's palm oil exports.

[4 markah]

[4 marks]

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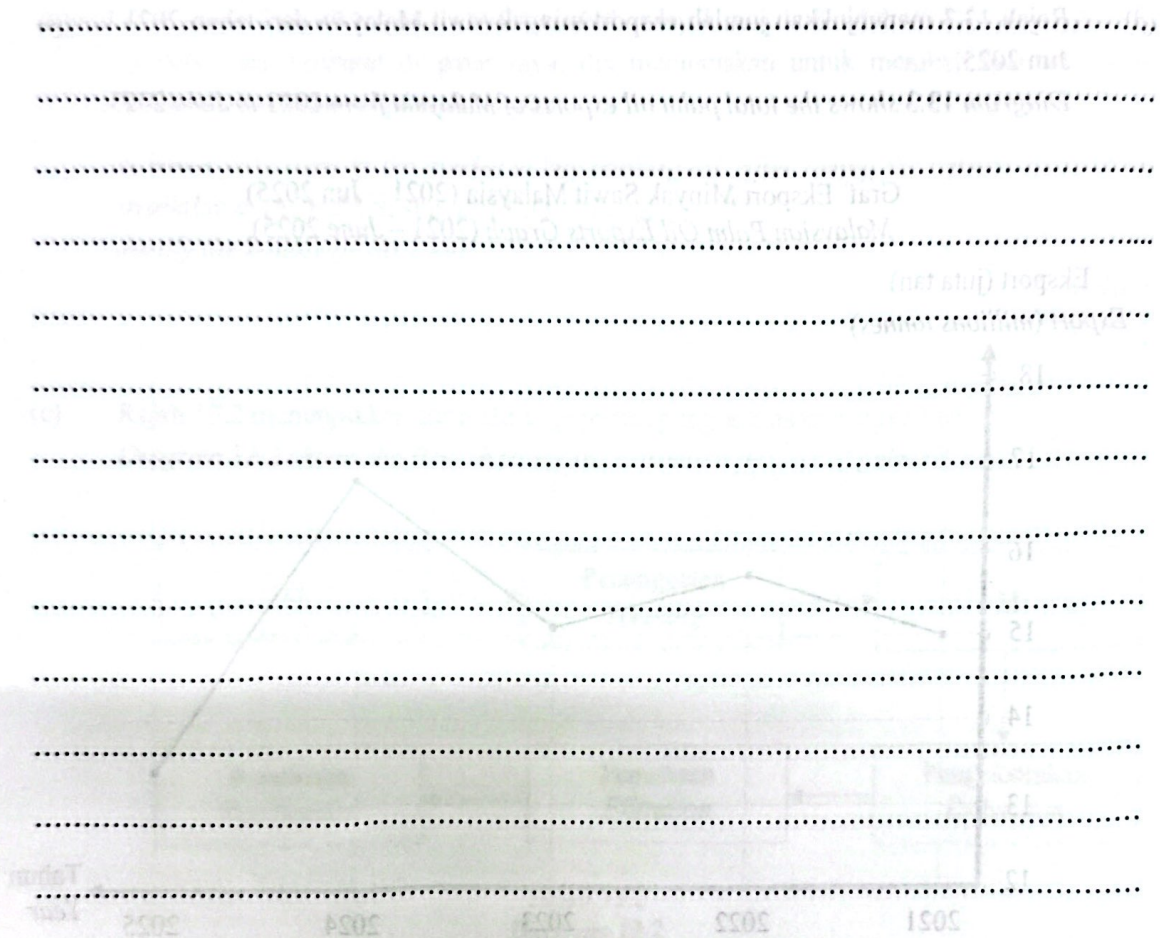


Diagram 13.3
Palm 13.3

Huraikan pola eksport minyak sawit Malaysia. Pada pendapat anda, apakah faktor-faktor yang mempengaruhi pola eksport minyak sawit Malaysia? (4 markah)

Describe the pattern of Malaysia's palm oil exports. In your opinion, what are the factors that influence the pattern of Malaysia's palm oil exports? (4 marks)

(100 markah)

This image shows a full page of white paper with horizontal dashed lines, typical of primary school writing paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

KERTAS PEPERIKSAAN TAMAT

[HALAMAN KOSONG]

[HALAMAN KOSONG]

**MAKLUMAT UNTUK CALON
INFORMATION FOR CANDIDATES**

1. Kertas soalan ini mengandungi tiga bahagian: **Bahagian A, Bahagian B dan Bahagian C.**
This question paper consists of three sections: Section A, Section B and Section C.
2. Jawab semua soalan dalam **Bahagian A dan Bahagian B.**
Jawapan anda bagi **Bahagian A dan Bahagian B** hendaklah ditulis dalam ruang yang disediakan dalam kertas peperiksaan ini.
Answer all questions in Section A and Section B.
Write your answers for Section A and Section B in the spaces provided in this examination paper.
3. Bagi **Bahagian C**, jawab Soalan 11 dan sama ada Soalan 12 atau Soalan 13.
Jawapan anda bagi **Bahagian C** hendaklah ditulis di muka surat ruang jawapan yang disediakan bagi setiap soalan.
Anda boleh menggunakan persamaan, gambar rajah, jadual, graf dan cara lain yang sesuai untuk menjelaskan jawapan anda.
For Section C, answer Question 11 and either Question 12 or Question 13.
Write your answers for Section C on the pages of answers provided for each question.
You may use equations, diagrams, tables, graphs and other suitable methods to explain your answers.
4. Rajah yang mengiringi soalan tidak dilukis mengikut skala kecuali dinyatakan.
The diagrams in the questions provided are not drawn to scale unless stated.
5. Markah yang diperuntukkan bagi setiap ceraihan soalan ditunjukkan dalam kurungan.
The marks allocated for each sub-part of a question are shown in brackets.
6. Jika anda hendak menukar jawapan, batalkan jawapan yang telah dibuat. Kemudian tulis jawapan yang baru.
If you wish to change your answer, cross out the answer that you have done. Then write down the new answer.
7. Anda dibenarkan menggunakan kalkulator saintifik.
You may use a scientific calculator.
8. Anda dinasihati supaya mengambil masa 60 minit untuk menjawab soalan dalam **Bahagian A**, 50 minit untuk **Bahagian B** dan 40 minit untuk **Bahagian C.**
You are advice to spend 60 minutes to answer questions in Section A, 50 minutes for Section B and 40 minutes for Section C.