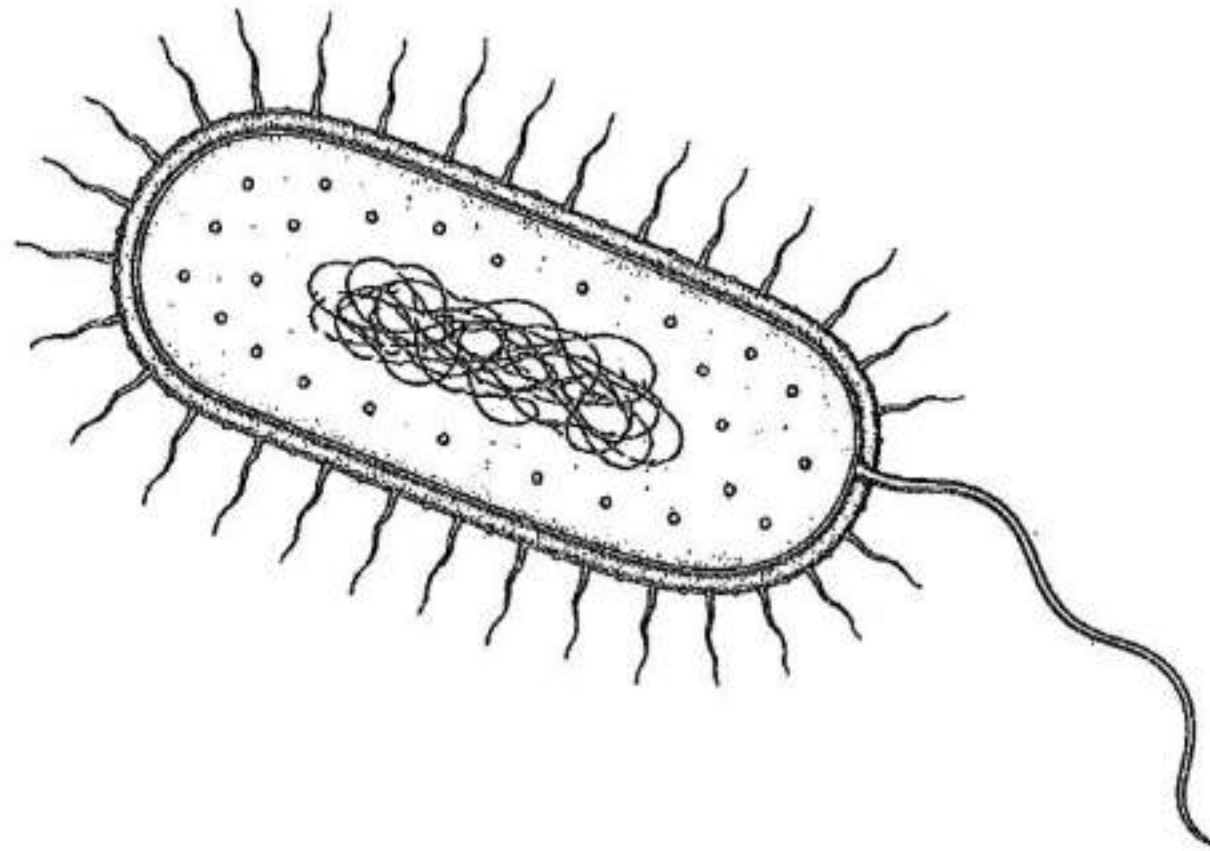


Bahagian A
Section A

[60 markah]
[60 marks]

Jawab **semua** soalan dalam bahagian ini.
*Answer **all** questions in this section.*

- 1 Rajah 1 menunjukkan sejenis bakteria primitif yang hidup dalam persekitaran yang sangat masin. Dinding selnya tidak mengandungi peptidoglikan.
Diagram 1 shows a primitive bacterium that lives in extremely salty environment. Its cell wall does not contain peptidoglycan.



Rajah 1/ *Diagram 1*

Berdasarkan Rajah 1,
Based on Diagram 1,

- (a) (i) Nyatakan alam dan jenis sel bagi organisma tersebut.
State the kingdom and type of cell for the organism.

Alam / *Kingdom* :

Jenis sel / *Type of cell* :

[2 markah/marks]

- (ii) Labelkan nukleoid dengan huruf N dalam Rajah 1.
Label nucleoid with letter N in Diagram 1.

[1 markah/mark]

1(a)(i)

	2
--	---

1(a)(ii)

	1
--	---

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- (b) (i) Jadual 1 menunjukkan hierarki taksonomi bagi organisma dalam Rajah 1.

Table 1 shows the taxonomy hierarchy for the organism in Diagram 1.

Peringkat <i>Level</i>	Takson <i>Taxon</i>
Filum / <i>Phylum</i>	Euryarchaeota
Kelas / <i>Class</i>	Halobacteria
Order / <i>Order</i>	Halobacteriales
Famili / <i>Family</i>	Halobacteriaceae
Genus / <i>Genus</i>	<i>Halobacterium</i>
Spesies / <i>Species</i>	<i>salinarum</i>

Jadual 1 / *Table 1*

Seorang murid menulis nama saintifik organisma itu sebagai *salinarum halobacterium*.

Kenal pasti dua kesilapan dalam menulis nama saintifik tersebut.

A student wrote the scientific name of the organism as salinarum halobacterium.

Identify two mistakes in writing the scientific name.

.....

.....

.....

[2 markah/marks]

- (ii) Jika nama saintifik itu ditulis tangan, bagaimanakah ia harus ditulis?
If the scientific name is handwritten, how should it be written?

.....

.....

[1 markah/mark]

1(b)(i)

2

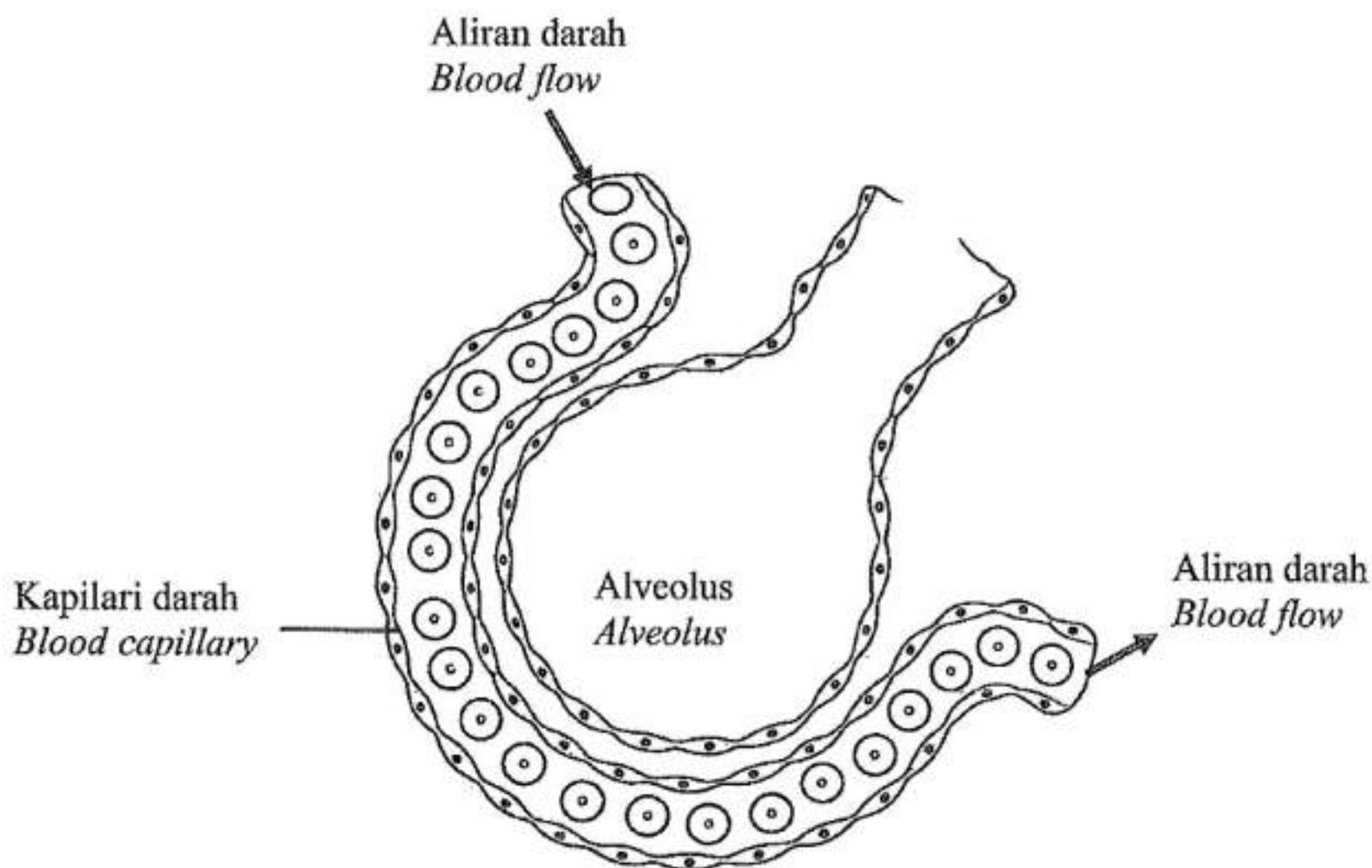
1(b)(ii)

1

Jumlah

6

- 2 Rajah 2.1 menunjukkan proses pertukaran gas yang berlaku di peparu.
Diagram 2.1 shows gaseous exchange process that occurs in the lungs.



Rajah 2.1/ *Diagram 2.1*

- (a) (i) Lukiskan arah pergerakan gas oksigen dengan menggunakan (—→) dan pergerakan gas karbon dioksida dengan menggunakan (---→) pada Rajah 2.1.
Draw the direction of movement of oxygen gas by using (—→) and the movement of carbon dioxide gas by using (---→) in Diagram 2.1.
- (ii) Nyatakan pigmen dalam eritrosit yang mengangkut gas respirasi di dalam badan.
State the pigment in the erythrocytes that transports respiratory gases in the body.

[2 markah/marks]

[1 markah/mark]

2(a)(i)

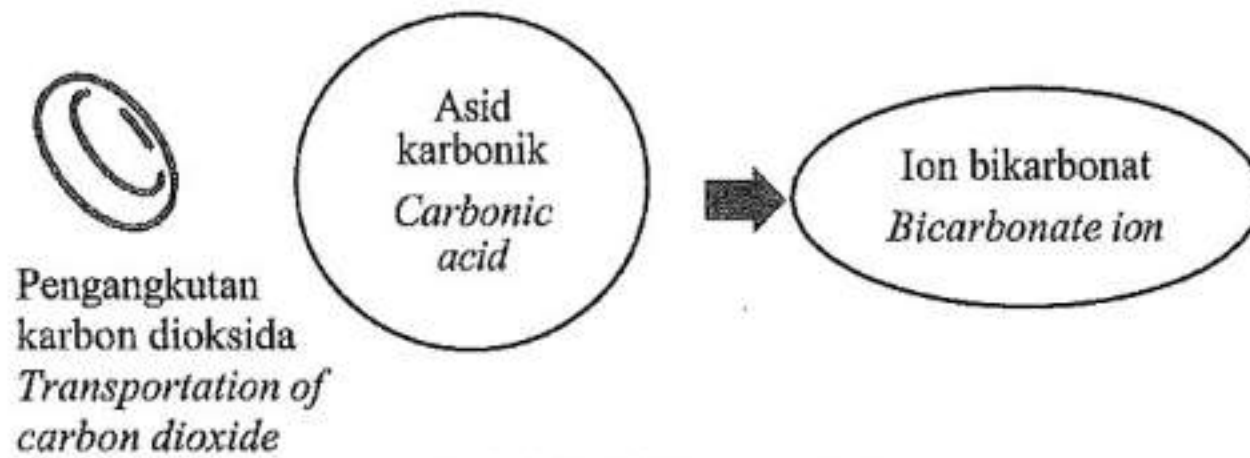
2

2(a)(ii)

1

- (b) Rajah 2.2 menunjukkan bagaimana eritrosit mengangkut 70% gas karbon dioksida.

Diagram 2.2 shows how the erythrocytes transport 70% carbon dioxide gas.



Rajah 2.2/ Diagram 2.2

Terangkan pembentukan ion bikarbonat dalam pengangkutan karbon dioksida.
Explain the formation of bicarbonate ion in carbon dioxide transportation.

2(b)

	2
--	---

[2 markah/marks]

- (c) Rajah 2.3 menunjukkan sebuah keluarga menggunakan dapur arang di dalam bilik tertutup semasa gangguan bekalan elektrik. Selepas 30 minit, mereka berasa pening, sesak nafas dan pengsan.
Diagram 2.3 shows a family uses a charcoal stove inside a closed room during a power outage. After 30 minutes, they feel dizzy, shortness of breath and fainted.



Rajah 2.3/ Diagram 2.3

Nyatakan mengapa aktiviti dalam Rajah 2.3 menyebabkan pening, sesak nafas dan pengsan

State why activity in Diagram 2.3 causing dizziness, shortness of breath and fainted.

2(c)

	1
--	---

Jumlah

	6
--	---

[1 markah/mark]

- 3 Rajah 3.1 menunjukkan situasi seorang doktor yang sedang menggunakan *Automated External Defibrillator (AED)* terhadap seorang pesakit yang tidak sedarkan diri kerana mengalami penginfarkan miokardium. AED berjaya untuk memulihkan denyutan jantung pesakit kepada normal.

Diagram 3.1 shows the situation of a doctor using an Automated External Defibrillator (AED) on a patient who is unconscious due to myocardial infarction. AED able to restore the patient's heartbeat back to normal.



Rajah 3.1/ Diagram 3.1

- (a) (i) Berdasarkan Rajah 3.1, AED telah menghasilkan tindakan luar kawal pada jantung pesakit tersebut. Nyatakan mengapa tindak balas tersebut adalah luar kawal.

Based on Diagram 3.1, AED has produced involuntary action on the patient's heart. State why the response is involuntary action.

.....

[2 markah/marks]

- (ii) Nyatakan sifat otot pada jantung.
State the characteristic of heart muscle.

.....

[1 markah/mark]

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3(a)(i)

1

3(a)(ii)

2

- (b) Rajah 3.2 menunjukkan seorang pesakit yang lumpuh seluruh badan.
Diagram 3.2 shows a whole body paralyzed patient.



Rajah 3.2/ Diagram 3.2

- (i) Terangkan kesan gigitan semut api kepada gerak balas pesakit tersebut.
Explain the effect of the fire ant bite towards the patient's response.

.....

.....

.....

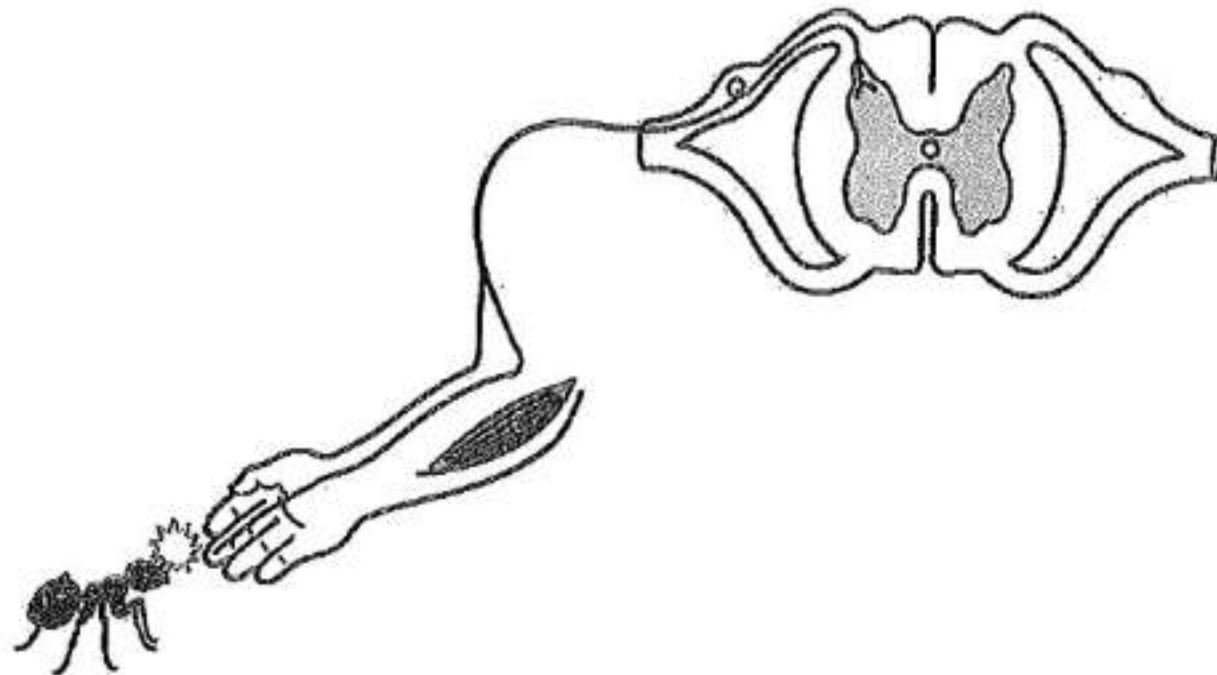
3(b)(i)

2

[2 markah/marks]

- (ii) Lengkapkan arkus refleks dalam Rajah 3.3 jika situasi tersebut berlaku kepada individu yang normal.
Complete the reflex arc in Diagram 3.3 if this situation happens to a normal individual.

- dengan melukis neuron yang terlibat
by drawing the neurons involved
- arah pengaliran impuls (—————>)
direction of impulse flow (—————>)

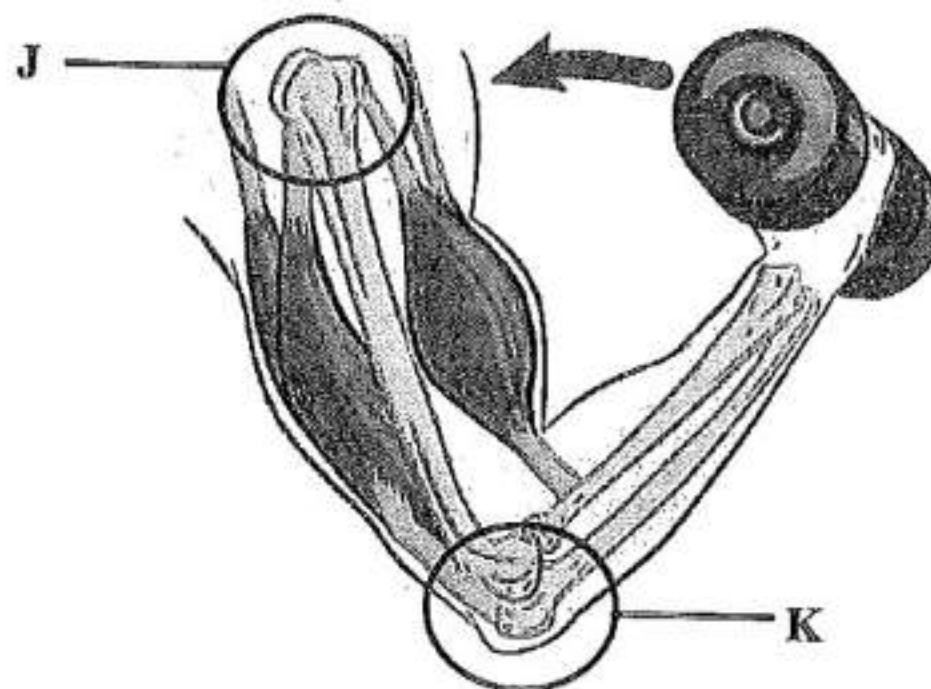


Rajah 3.3/ Diagram 3.3

[2 markah/marks]

- 4 Rajah 4.1 menunjukkan lengan seorang lelaki yang sedang melakukan senaman dumbel.

Diagram 4.1 shows an arm of a man who is doing a dumbbell exercise.



Rajah 4.1/ Diagram 4.1

- (a) (i) Nyatakan nama sendi J dan K.
State the names of the joints J and K.

J:

K:

[2 markah/marks]

- (ii) Nyatakan bagaimana pergerakan di Rajah 4.1 berlaku.
State how the movement in Diagram 4.1 occurs.

.....
.....

[1 markah/mark]

3(b)(ii)

2

Jumlah

7

4(a)(i)

2

4(a)(ii)

1

- (iii) Bezakan antara sendi J dan sendi K.
Differentiate between joint J and joint K.

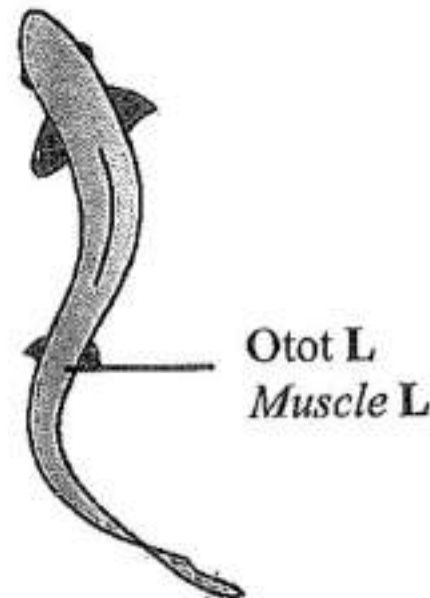
	J	K
Lokasi: <i>Location:</i>		
Fungsi: <i>Function:</i>		

[2 markah/marks]

4(a)(iii)

2

- (b) Rajah 4.2 menunjukkan pergerakan seekor ikan.
Diagram 4.2 shows the movement of a fish.



Rajah 4.2/ Diagram 4.2

Otot L mengalami kesukaran untuk mengecut. Terangkan kesan tersebut ke atas pergerakan ikan.

Muscle L has difficulties to contract. Explain the effect on the movement of fish.

.....

.....

.....

[2 markah/marks]

4(b)

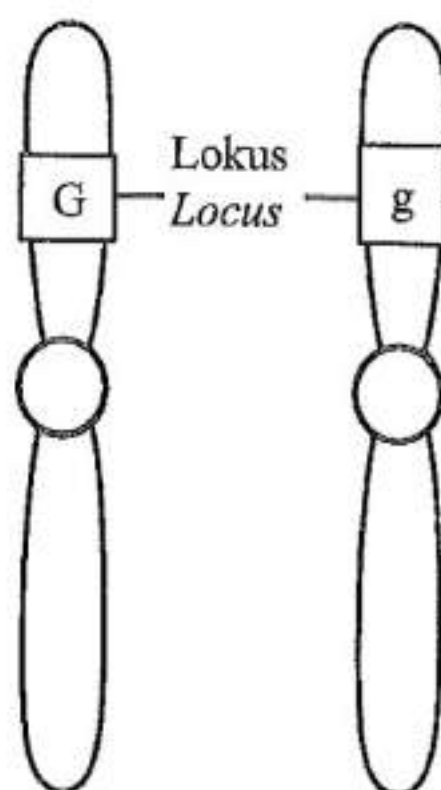
2

Jumlah

7

- 5 Rajah 5 menunjukkan sepasang kromosom pada pokok kacang pis X. Ciri warna pod kacang pis ditentukan oleh sepasang alel (G dan g). Alel bagi pod kacang pis berwarna hijau diwakili oleh G dan alel bagi pod kacang pis berwarna kuning diwakili oleh g.

Diagram 5 shows a pair of homologous chromosomes in pea plant X. Pod color of pea plant characteristic is determined by a pair of alleles (G and g). The allele for green pea pods is represented by G and the allele for yellow pea pods is represented by g.



Rajah 5 / Diagram 5

- (a) (i) Nyatakan maksud lokus.
State the meaning of locus.

.....
.....

[1 markah/mark]

- (ii) Nyatakan genotip organisma tersebut.
State the genotype of the organism.

.....

[1 markah/mark]

- (b) Terangkan bagaimana ciri warna pod pokok kacang pis X ditentukan.
Describe how the pod color of pea plant X is determined.

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

[3 markah/marks]

5(a)(i)

1

5(a)(ii)

1

5(b)

3

- (c) Pokok kacang pis X dikacukkan dengan pokok Y menghasilkan semua anak pokok yang mempunyai pod kacang pis berwarna hijau.
Nyatakan genotip bagi pokok Y. Terangkan mengapa.
The pea plant X crossed with plant Y produces all the offspring with green pea pods.
State the genotype of plant Y. Explain why.

.....

.....

.....

.....

[3 markah/marks]

5(c)

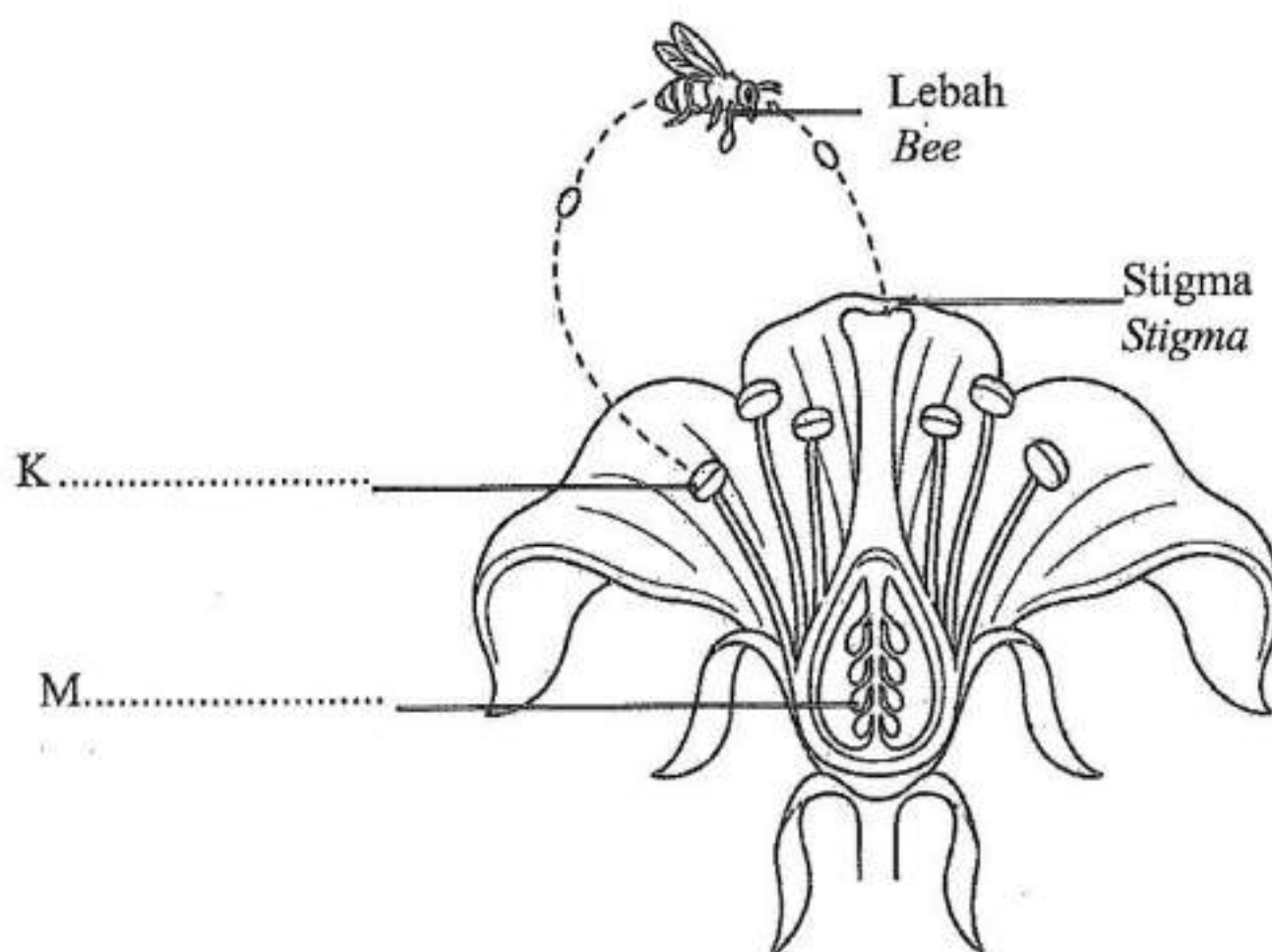
3

Jumlah

8

- 6 Rajah 6.1 menunjukkan proses pendebungaan yang berlaku dalam tumbuhan berbunga.

Diagram 6.1 shows the pollination process that occurs in flowering plant.



Rajah 6.1/ Diagram 6.1

- (a) (i) Pada Rajah 6.1, labelkan K dan M dalam ruang yang disediakan.
On Diagram 6.1, label K and M in the space provided.

[2 markah/marks]

6(a)(i)

2

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- (ii) Struktur K dan struktur M menghasilkan gamet masing-masing. Berikan **dua** persamaan antara gamet yang dihasilkan oleh struktur K dan struktur M.

Structure K and structure M produce gametes respectively.

*Give **two** similarities of the gametes produced by structure K and structure M.*

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

[2 markah/marks]

6(a)(ii)

2

- (b) Seorang pekebun telah menyembur pestisid untuk mengawal populasi serangga perosak di kebun tersebut. Aktiviti ini telah menyebabkan populasi lebah berkurang dengan mendadak.

A farmer sprayed pesticides to control the population of insect pests in the garden. This activity caused the bee population to decrease rapidly.

Terangkan kesan aktiviti tersebut terhadap hasil tanamannya.

Explain the effect of this activity on the crops yield.

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

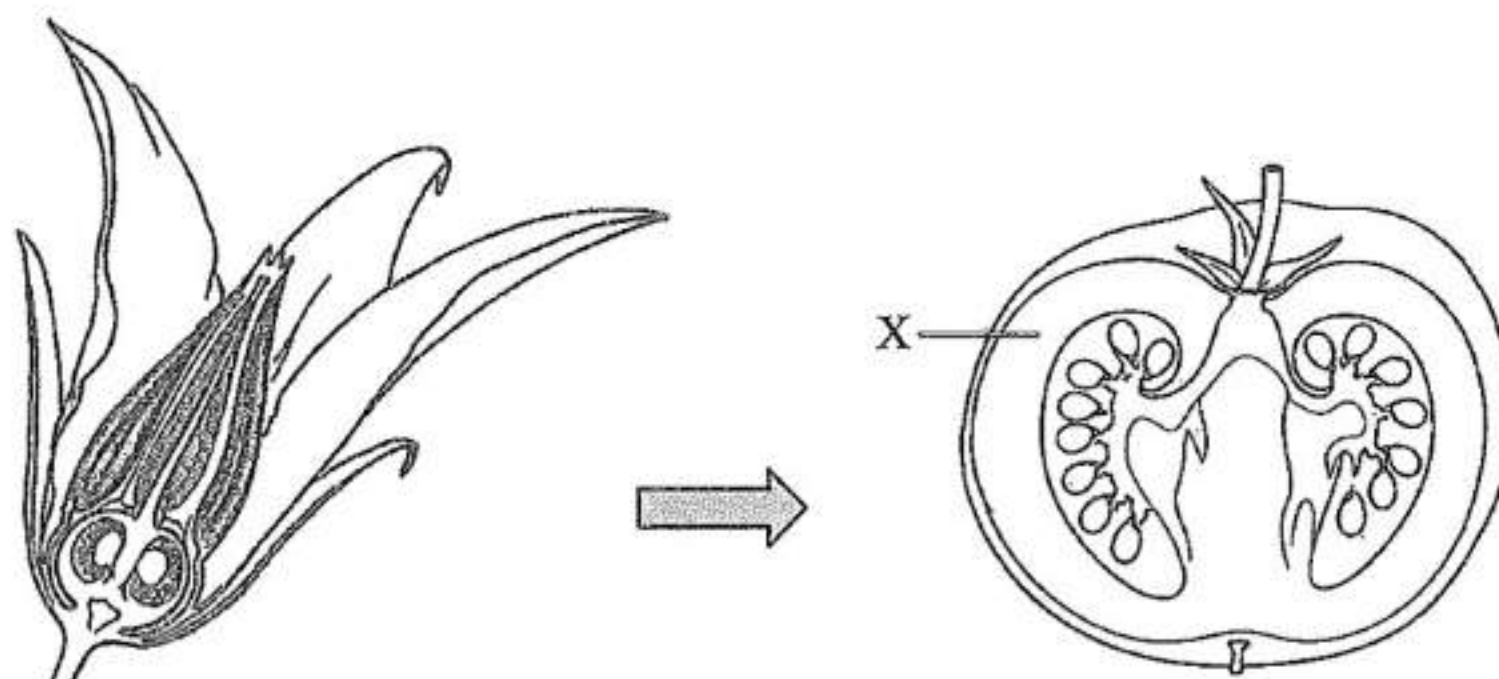
[3 markah/marks]

6(b)

3

- (c) Rajah 6.2 menunjukkan perkembangan dalam bunga selepas proses persenyawaan ganda dua.

Diagram 6.2 shows development in flowers after double fertilization process.



Rajah 6.2/ Diagram 6.2

Dalam Rajah 6.2, labelkan bahagian pada bunga yang akan berkembang menjadi struktur X dengan huruf Y.

In Diagram 6.2, label the part of the flower that will develop into X structure with the letter Y.

[1 markah/mark]

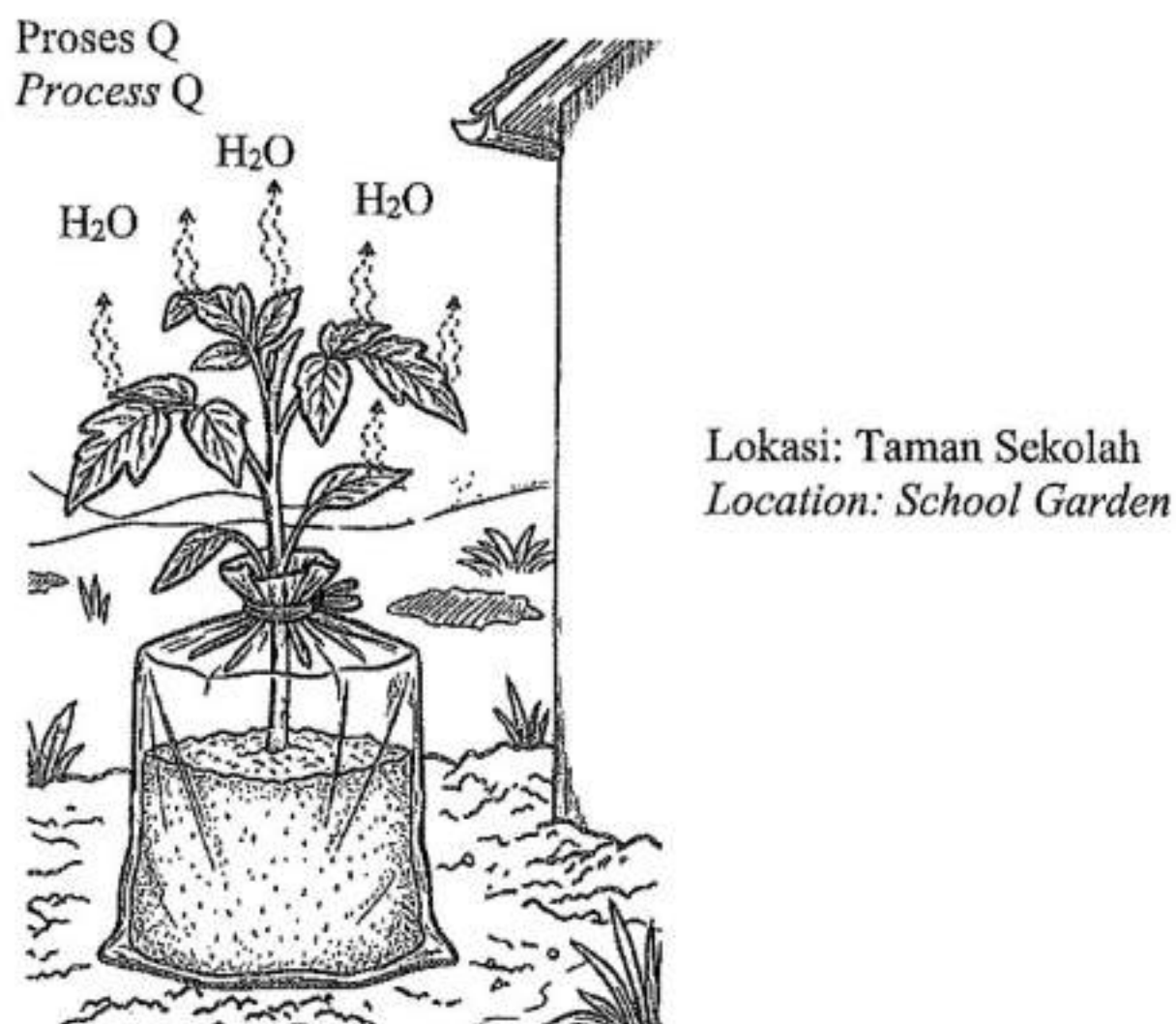
6(c)

1

Jumlah

8

- 7 Rajah 7.1 menunjukkan air tersejat dari permukaan daun yang melalui proses Q.
Diagram 7.1 shows water evaporation from the leaf through process Q.



Rajah 7.1/Diagram 7.1

- (a) (i) Nyatakan proses Q.
State proses Q.

.....
 [1 markah/mark]

7(a)(i)

	1
--	---

- (ii) Namakan sel yang mengawal pembukaan liang bagi membolehkan wap air tersejat semasa proses Q berlaku.
Name the cell that controls the opening of the pore to allow water vapor to evaporate during process Q.

.....
 [1 markah/mark]

7(a)(ii)

	1
--	---

- (b) (i) Satu eksperimen telah dijalankan bagi mengkaji kesan keamatan cahaya terhadap kadar kehilangan air dalam pokok. Jisim awal pokok direkodkan pada pukul 8 a.m sebelum diletakkan di lokasi seperti yang ditunjukkan dalam Rajah 7.1. Jisim akhir pokok direkodkan pada pukul 4 p.m. Keputusan eksperimen ditunjukkan seperti di bawah.

An experiment was carried out to investigate the effect of light intensity on the rate of water loss in a plant. The initial mass of the plant was recorded at 8 a.m. before it was placed at the location shown in Diagram 7.1. The final mass of the plant was recorded at 4 p.m. The results of the experiment are shown below.

Lokasi <i>Location</i>	Jisim awal (g) <i>Initial mass (g)</i>	Jisim akhir (g) <i>Final mass (g)</i>
		

Berdasarkan maklumat di atas, kirakan kadar kehilangan air pada pokok tersebut.

Based on the information above, calculate the rate of water loss in the plant.

[2 markah/marks]

7(b)(i)

2

- (ii) Sekiranya pokok di taman sekolah dipindahkan ke padang, ramalkan kehilangan jisim pada pokok tersebut. Terangkan.
If the plant in the school garden is moved to the field, predict the loss in mass of the plant. Explain.

.....

[2 markah/marks]

7(b)(ii)

2

- (c) Seorang petani ingin menanam tumbuhan di kawasan yang sering mengalami cuaca panas dan kering. Beliau mempunyai dua pilihan spesies:
A farmer wants to plant a crop in an area that frequently experiences hot and dry weather. He has two species to choose from:

- **Spesies P:** Mempunyai luas permukaan daun yang besar dan nipis.
Species P: Has a large and thin leaf surface area.
- **Spesies Q:** Mempunyai daun yang kecil dan kehadiran bulu halus (trikom) pada epidermis bawah.
Species Q: Has small leaves and the presence of fine hairs (trichomes) on the lower epidermis

Petani tersebut ingin memaksimumkan hasil tanaman namun bimbang tentang kos pengairan. Kenal pasti spesies yang akan mengeluarkan hasil tanaman yang lebih tinggi. Justifikasi pilihan anda.
The farmer wants to maximize crop yield but is concerned about irrigation costs. Identify the species that will produce higher crop yield. Justify your choice.

.....

[3 markah/marks]

7(c)

3

Jumlah

9

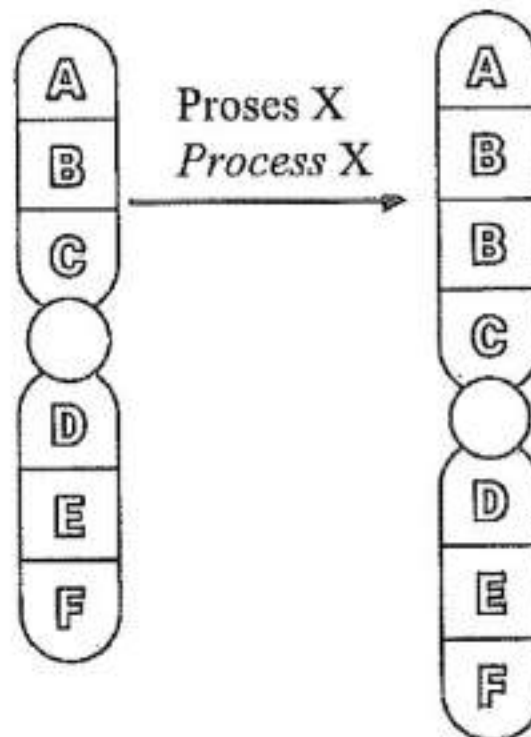
<https://t.me/cikgufazliebiosensei>

- 8 Rajah 8.1 menunjukkan individu mengalami penyakit genetik Hipertrikosis, sindrom Werewolf. Rajah 8.2 menunjukkan salah satu faktor yang menyebabkan penyakit tersebut apabila terdedah kepada mutagen.

Diagram 8.1 shows an individual who is suffering genetic disease Hipertrichosis, Werewolf syndrome. Diagram 8.2 shows one of the factors that causes the disease when exposed to mutagen.



Rajah 8.1/ Diagram 8.1



Rajah 8.2/ Diagram 8.2

- (a) Berdasarkan Rajah 8.1 dan 8.2,
Based on Diagram 8.1 and 8.2,

Terangkan bagaimana proses X menyebabkan perubahan fizikal kepada individu dalam Rajah 8.1.

Explain how process X causing the physical change in the individual in Diagram 8.1.

.....

.....

.....

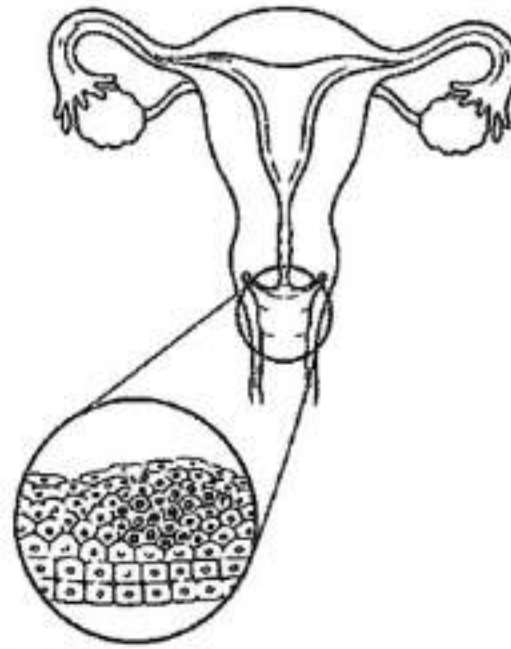
.....

[3 markah/marks]

8(a)

	3
--	---

- (b) Rajah 8.3 menunjukkan individu yang menghidap sejenis kanser.
Diagram 8.3 shows an individual who is suffering from a type of cancer.



Rajah 8.3/ Diagram 8.3

Nyatakan satu agen biologi yang boleh menyebabkan penyakit yang ditunjukkan dalam Rajah 8.1 dan Rajah 8.3.

State one biological agent that can cause the disease shown in Diagram 8.1 and Diagram 8.3.

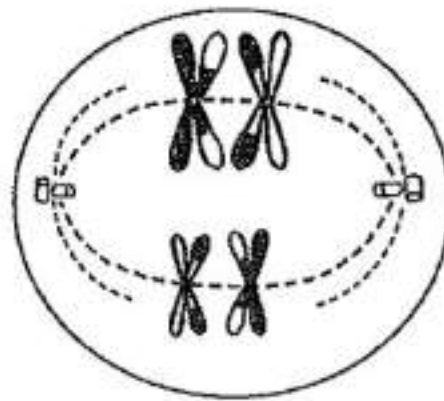
.....

[1 markah/mark]

8(b)

1

- (c) Rajah 8.4 menunjukkan salah satu peringkat dalam pembahagian sel.
Diagram 8.4 shows a stage in cell division.



Rajah 8.4/ Diagram 8.4

Bezakan **kepentingan** sel anak yang terhasil antara pembahagian sel dalam Rajah 8.4 dengan sel anak yang terhasil di sel soma.

*Differentiate the **importance** daughter cells produced by cell division in Diagram 8.4 with the daughter cells produced at somatic cell.*

.....

.....

.....

.....

[3 markah/marks]

8(c)

3

(d)

Kerosakan tisu rawan pada pinggul boleh dirawat dengan teknik yang menggunakan sel-sel daripada sum-sum tulang.
The damage in cartilage tissue at the hip can be treated with technique using cells from bone marrow.

Rajah 8.3/ Diagram 8.3

Berdasarkan pernyataan diatas, cadangkan kaedah yang boleh digunakan untuk merawat kerosakan tisu rawan tersebut.

Based on statement above, suggest method that can be used to treat the damage in cartilage tissue.

.....

.....

.....

.....

[2 markah/marks]

8(d)

	2
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Jumlah

	9
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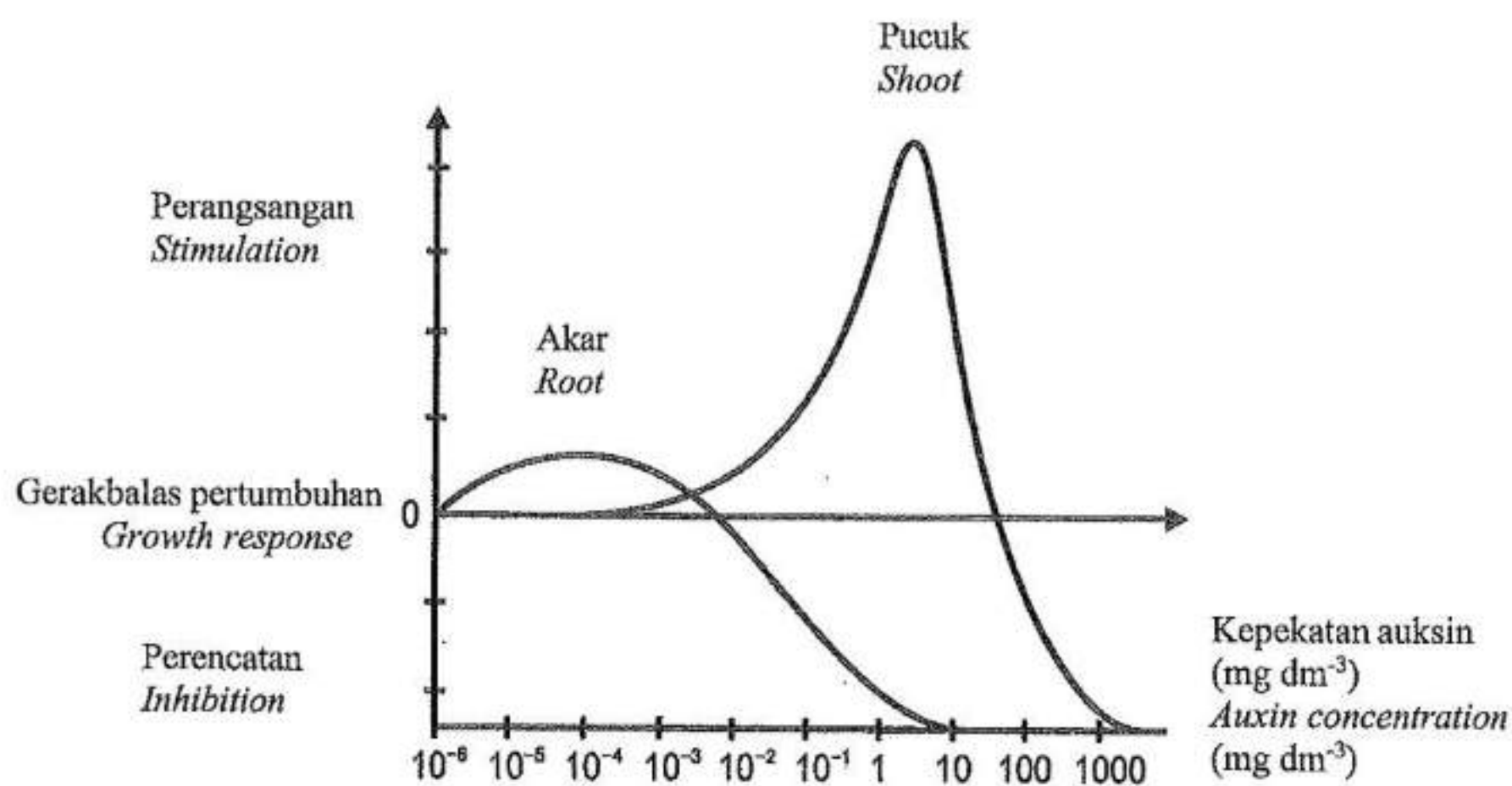
Bahagian B
Section B

[20 markah]

[20 marks]

Jawab mana-mana **satu** soalan dalam bahagian ini.*Answer any **one** question in this section.*

- 9 (a) Auksin memberikan kesan yang berbeza kepada sel-sel di pucuk dan sel-sel di akar. Rajah 9.1 menunjukkan graf kesan kepekatan auksin terhadap pemanjangan pucuk dan akar.

*Auxin produces different effects to the cells in the shoots and the cells in the roots.**Diagram 9.1 shows a graph of the effect of auxin concentration towards elongation of shoot and root.*

Rajah 9.1/ Diagram 9.1

Berdasarkan Rajah 9.1, nyatakan inferens kesan kepekatan auksin yang tinggi terhadap pemanjangan pucuk dan akar.

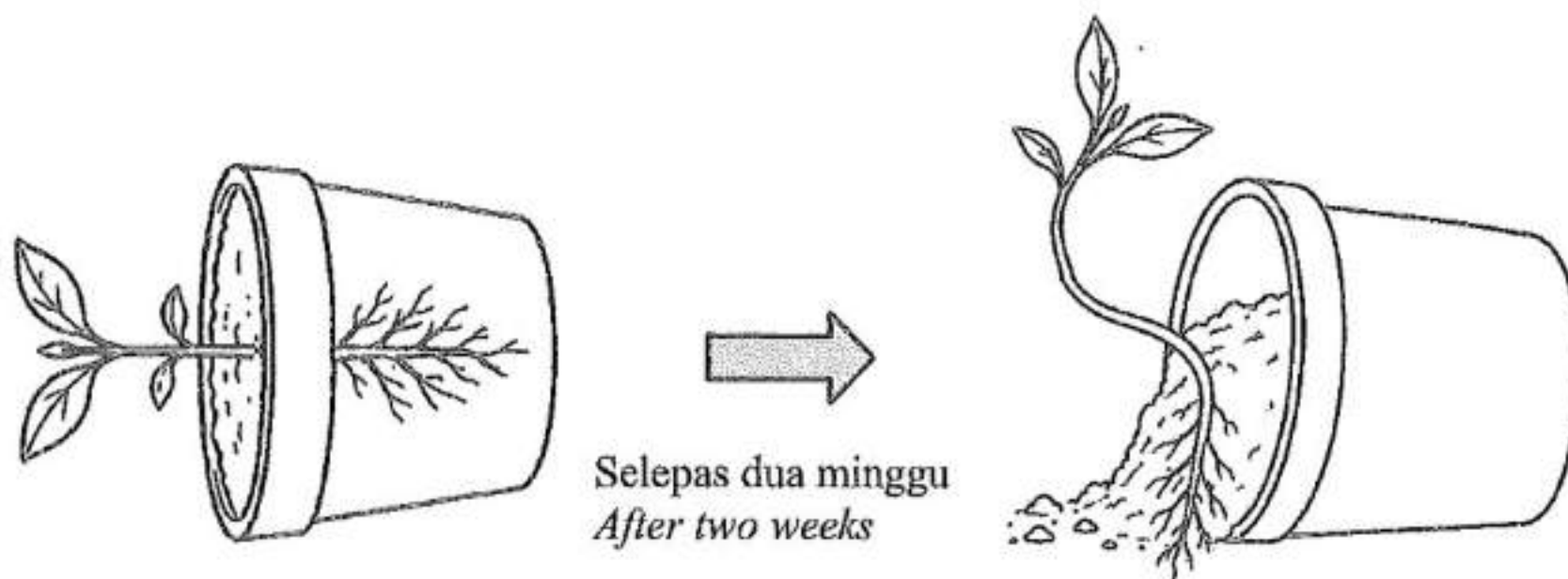
Based on Diagram 9.1, state the inference of the effect of high concentration of auxin towards shoot and root.

[2 markah] [2 marks]

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- (b) Kebun Pn.S telah dilanda ribut menyebabkan salah satu pasu pokok yang ditanam oleh beliau telah jatuh dan terbalik. Beliau hanya menyedari keadaan tersebut selepas dua minggu.

Ms. S's garden was hit by a storm, causing one of the potted plants she had planted to fall and overturn. She only realized the situation after two weeks.



Rajah 9.2/ Diagram 9.2

Berdasarkan Rajah 9.2, terangkan peranan auksin dan gerak balas pertumbuhan yang berlaku selepas 2 minggu terhadap:

Based on Diagram 9.2, explain the role of auxin and the growth response that occurs after two weeks towards:

- Pucuk/Shoots
- Akar/Roots

[8 markah] [8 marks]

- (c) Satu eksperimen telah dijalankan untuk mengkaji kesan kehadiran fitohormon terhadap kadar pemasakan buah mangga.

An experiment was conducted to study the effect of the presence of phytohormone on the ripening rate of mango fruits.

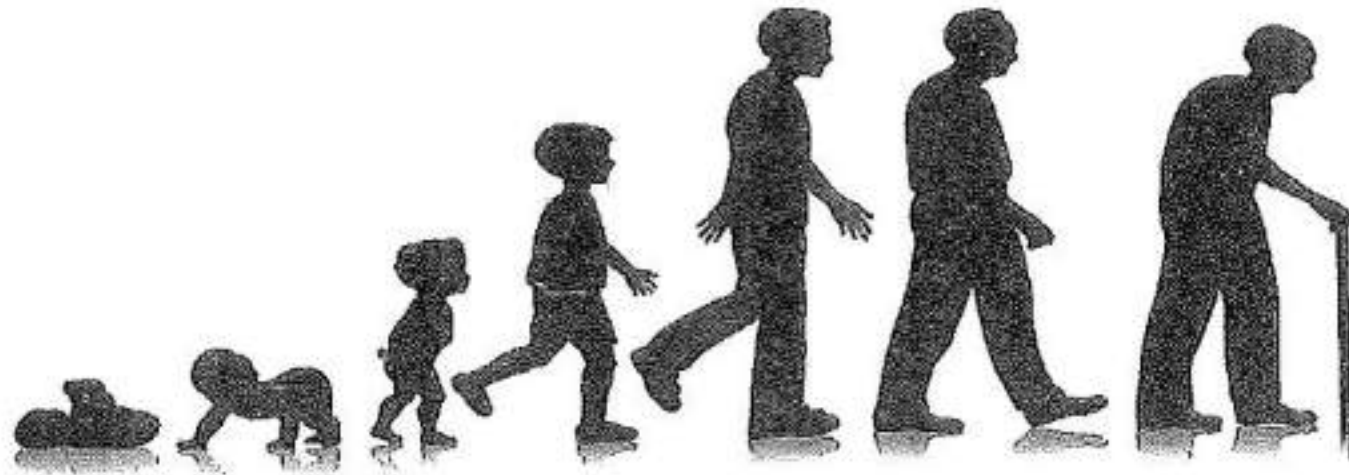
Beg Kertas P Paper bag P	10 biji mangga muda disimpan di dalam beg kertas yang tertutup bersama beberapa biji pisang masak. 10 unripe mangoes are stored in a sealed paper bag with several ripe bananas.
Beg Kertas Q Paper bag Q	10 biji mangga muda disimpan di dalam beg kertas yang tertutup. 10 unripe mangoes are stored in a sealed paper bag.

Bandingkan kesan kehadiran fitohormon terhadap pemasakan buah mangga di dalam beg kertas P dengan beg kertas Q selepas seminggu.

Compare the effects of the presence of phytohormone on the ripening of mangoes in paper bag P and paper bag Q after one week.

[10 markah][10 marks]

- 10 (a) Rajah 10.1 menunjukkan peringkat pertumbuhan manusia.
Diagram 10.1 shows stages of human growth.



Rajah 10.1/ *Diagram 10.1*

Berdasarkan Rajah 10.1, terangkan satu parameter yang boleh digunakan mengukur pertumbuhan.

Based on Diagram 10.1, explain one parameter that can be used to measure the growth.

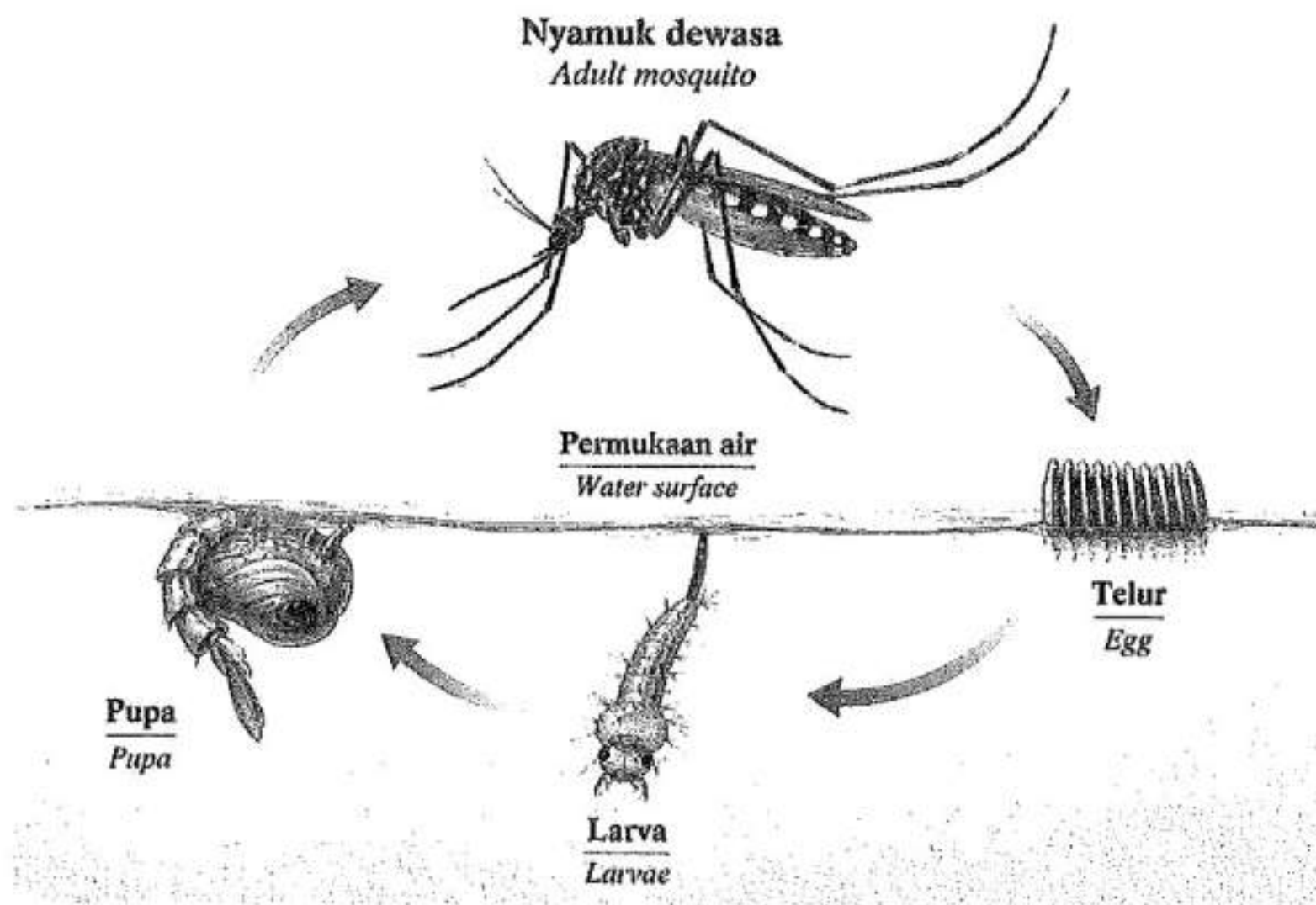
[2 markah] [2 marks]

- (b) Rajah 10.2(a) menunjukkan tapak pengumpulan sampah di kawasan perumahan.
Rajah 10.2 (b) menunjukkan metamorfosis nyamuk *Aedes aegypti*.
Diagram 10.2(a) shows a garbage collection site in a residential area. Diagram 10.2 (b) shows the metamorphosis of the Aedes aegypti mosquito.



Rajah 10.2(a)/ *Diagram 10.2(a)*

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Rajah 10.2 (b)/ Diagram 10.2 (b)

- (i) Kawasan perumahan tersebut telah mengalami peningkatan demam denggi di kalangan penduduk. Berdasarkan Rajah 10.2 (a) dan Rajah 10.2 (b),
- Terangkan bagaimana keadaan tapak pengumpulan sampah tersebut mempengaruhi populasi nyamuk *Aedes aegypti*.
 - Terangkan aktiviti yang boleh dilakukan oleh penduduk kawasan perumahan untuk menyelesaikan masalah tersebut.

The residential area has experienced an increase in dengue fever among the residents. Based on Diagram 10.2 (a) and Diagram 10.2 (b),

- *Explain how the conditions of the garbage collection site affect the population of *Aedes aegypti* mosquitoes.*
- *Explain the activities that can be done by the residents of the residential area to solve the problem.*

[8 markah] [8 marks]

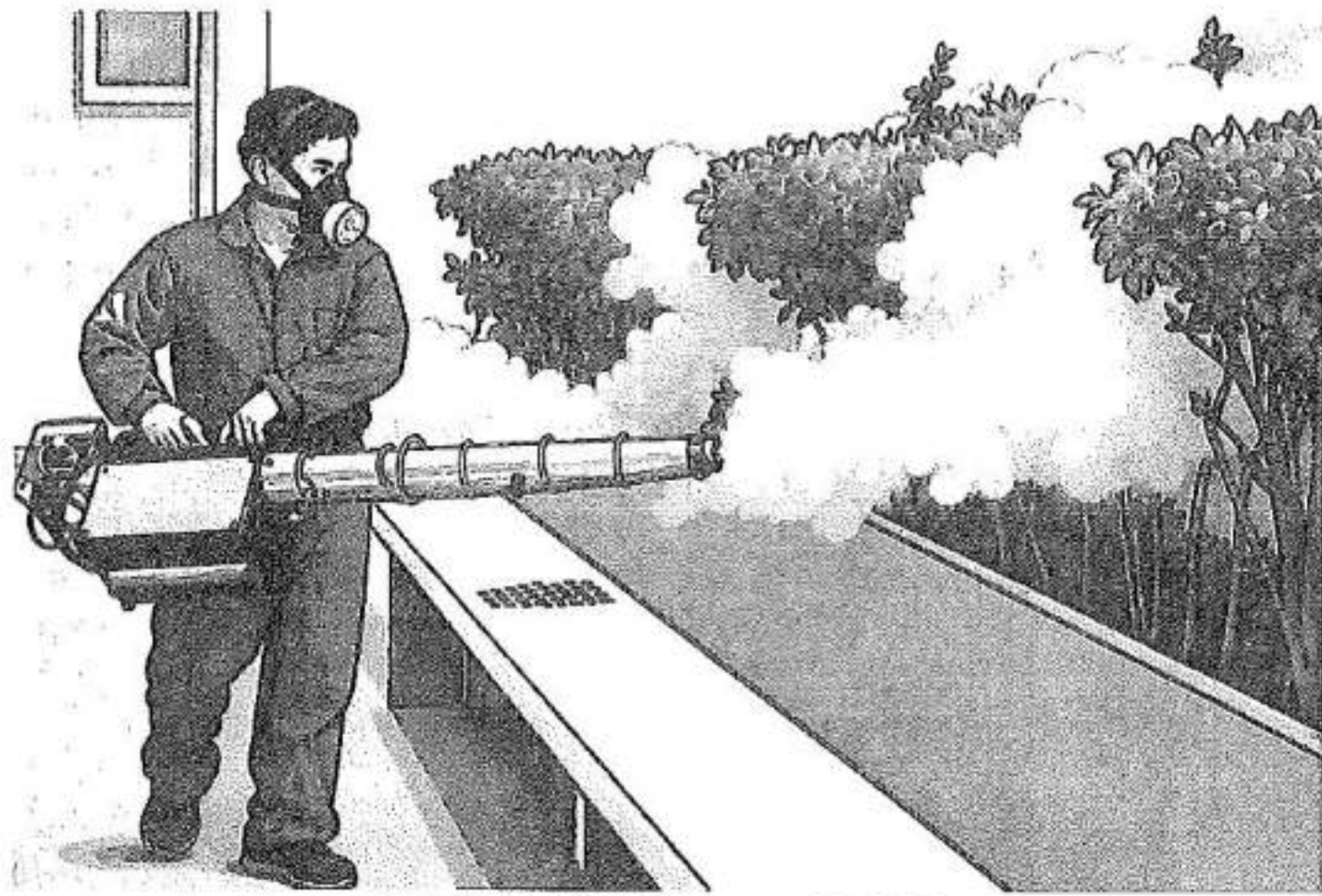
- (ii) Rajah 10.3(a) menunjukkan poster infografik tentang kaedah Wolbachia dan Rajah 10.3(b) menunjukkan kaedah konvensional dalam pengawalan nyamuk. Kaedah Wolbachia digunakan untuk mengawal penyakit seperti denggi, Zika, dan Chikungunya dengan menyuntik bakteria *Wolbachia* ke dalam nyamuk *Aedes aegypti*. Bakteria ini menghalang virus denggi daripada membiak dalam nyamuk, menjadikannya kurang berupaya menyebarkan penyakit kepada manusia. Nyamuk *Aedes* yang mengandungi bakteria *Wolbachia* dikenali sebagai nyamuk *Aedes* berWolbachia.

Diagram 10.3(a) shows an infographic poster about Wolbachia method and Diagram 10.3(b) shows conventional method in mosquito controls.

The Wolbachia method is used to control diseases such as dengue, Zika, and Chikungunya by injecting Wolbachia bacteria into *Aedes aegypti* mosquitoes. This bacterium prevents the dengue virus from reproducing in the mosquito, making it less able to transmit the disease to humans. *Aedes* mosquitoes that contain Wolbachia bacteria are known as Wolbachia *Aedes* mosquitoes.



Rajah 10.3(a)/ Diagram 10.3(a)



Rajah 10.3(b)/ *Diagram 10.3(b)*

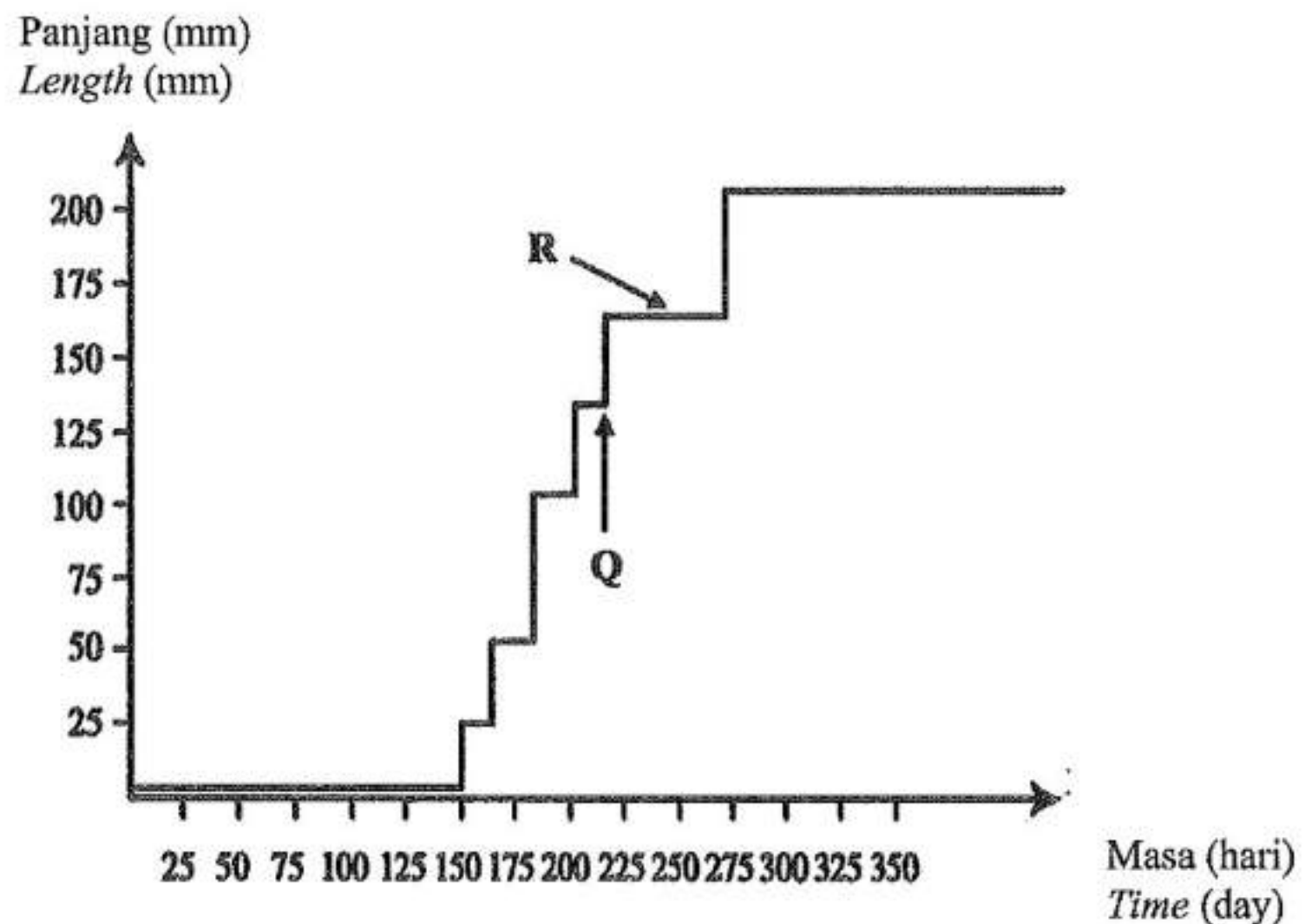
Bandingkan penggunaan kaedah Wolbachia dan kaedah konvensional dalam pengawalan nyamuk.

Compare the use of Wolbachia method and conventional methods in mosquito control.

[5 markah] [5 marks]

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- (c) Rajah 10.4 menunjukkan lengkung pertumbuhan untuk seekor serangga.
Diagram 10.4 shows the growth curve for an insect.



Rajah 10.4/ *Diagram 10.4*

- (i) Q dan R adalah fasa-fasa pada lengkung pertumbuhan.
Berdasarkan Rajah 10.4, terangkan perubahan yang berlaku pada setiap fasa.
Q and R are phases of the growth curve.
Based on Diagram 10.4, explain the changes occur in each phase.
[5 markah] [5marks]

Bahagian C
Section C

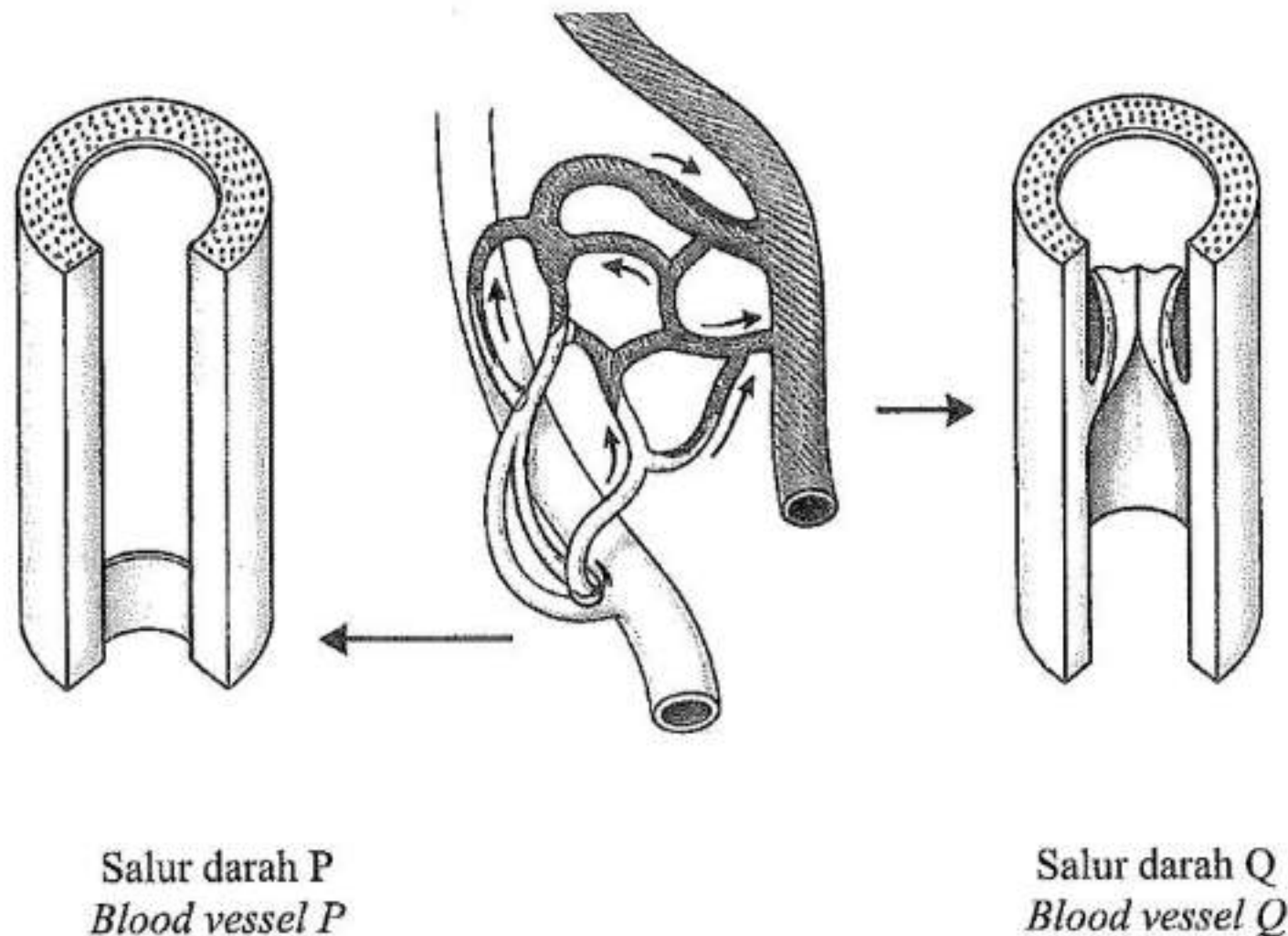
[20 markah]

[20 marks]

Jawab **semua** soalan dalam bahagian ini.

Answer **all** question in this section.

- 11 Rajah 11.1 menunjukkan sebahagian daripada salur darah di jantung.
Diagram 11.1 shows part of blood vessels in the heart.



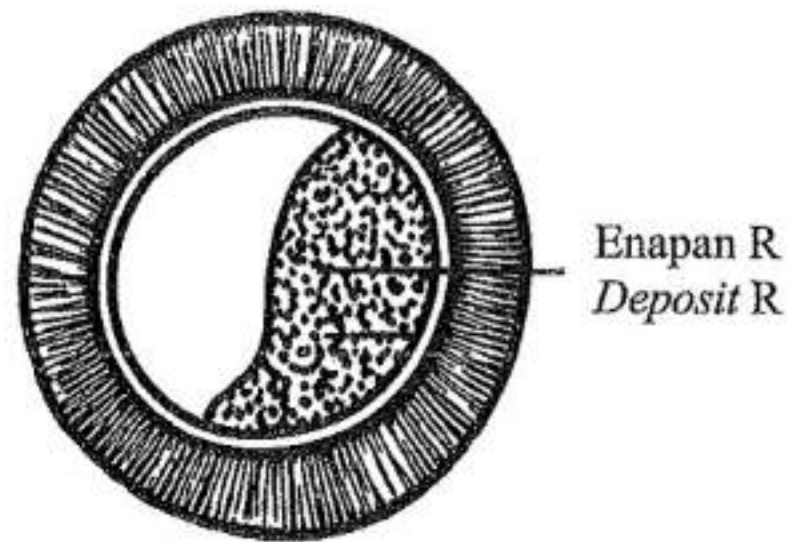
Rajah 11.1/ Diagram 11.1

- (a)(i) Nyatakan ciri-ciri salur darah P.
State the characteristics of blood vessel P.

[3 markah/3 marks]

- (ii) Rajah 11.2 menunjukkan keratan rentas salur darah P dalam Rajah 11.1 bagi individu yang mengamalkan tabiat pemakanan yang tidak sihat.
Diagram 11.2 shows a cross section of blood vessel P in Diagram 11.1 for an individual who practices unhealthy eating habits.

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Rajah 11.2/ Diagram 11.2

Terangkan kesan tabiat pemakanan yang tidak sihat terhadap kesihatan individu tersebut.

Explain the effects of unhealthy eating habits on the health of the individual.

[7 markah/7 marks]

- (iii) Cadangkan amalan untuk mengelakkan pembentukan enapan R dalam salur darah P. Terangkan.

Suggest practices to avoid the formation of R deposit in the blood vessel P. Explain.

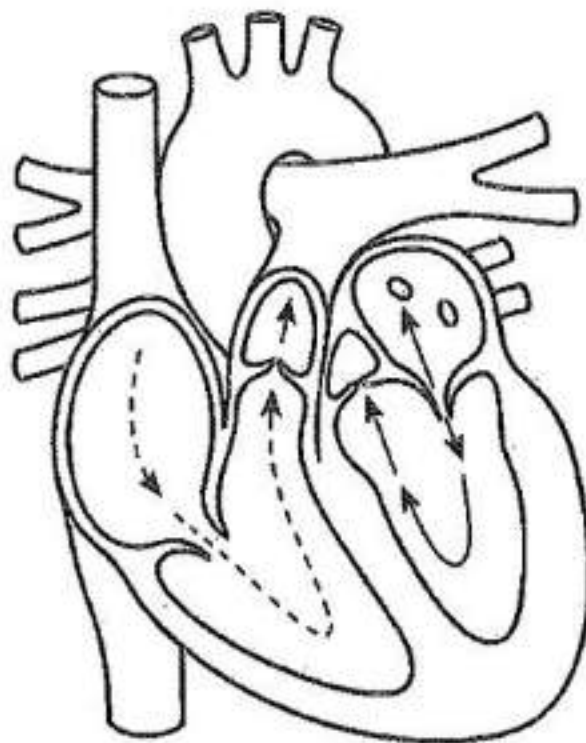
[4 markah/4 marks]

- (b) Rajah 11.3(a) menunjukkan keratan membujur jantung normal seorang kanak-kanak. Rajah 11.3(b) menunjukkan keratan membujur jantung seorang kanak-kanak mengalami kecacatan pada septum ventrikel.

Diagram 11.3(a) shows a longitudinal section of a normal heart of a child. Diagram 11.3(b) shows a longitudinal section of a child's heart with defect at the septum of a ventricle.

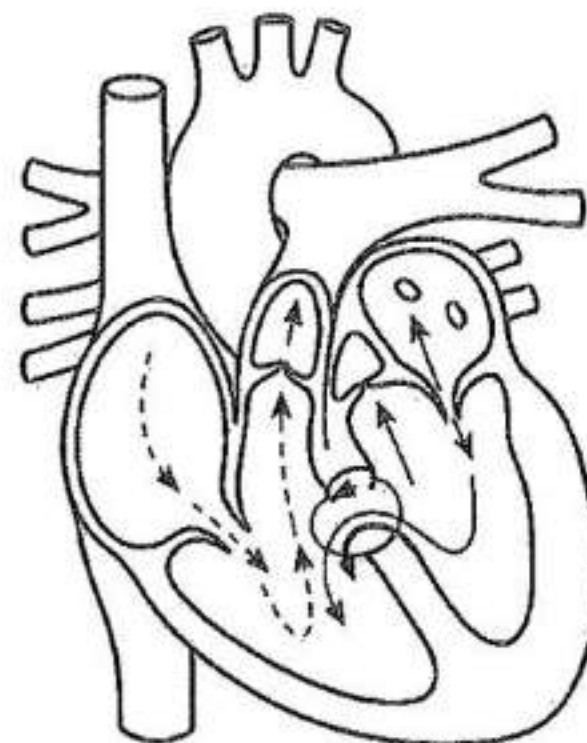
Kekunci / Key:

- > Darah terdeoksigen / Deoxygenated blood
 —> Darah beroksigen / Oxygenated blood



Normal septum
 Normal septum

Rajah 11.3(a)/ Diagram 11.3(a)



Kecacatan septum
 Defect septum

Rajah 11.3(b)/ Diagram 11.3(b)

Doktor menasihati kanak-kanak itu untuk menjalani pembedahan supaya septumnya kembali normal. Wajarkan nasihat doktor tersebut.

The doctor advised the child to undergo surgery so that the septum can return to normal. Justify the doctor's advice.

[6 markah/6 marks]

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