Sains PMR
Koleksi Percubaan 2006-2008
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BERDISIPLIN BERILMU BERAMAL

Nama : .....

Kelas : .....

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YIK 07 → Question 3

3. Diagram 3 shows the cross section of human skin.

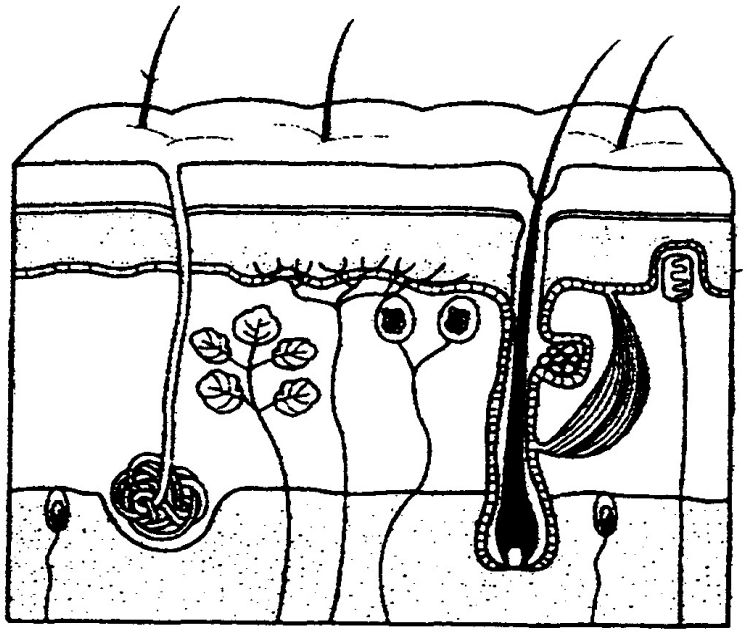


Diagram 3

(a) On Diagram 3, label the receptors using the following words

Touch receptor	Cold receptor	Pressure receptor

[3 marks]

(b) Which receptor is stimulated when the patient receives an injection?

.....

[1 mark]

(c) Give **two** reasons why the arm is picked by the doctor to give injection.

(i) .....

(ii) .....

[2 marks]

(d) State the type of receptors largely used by blind people?

.....

[1 mark]

MRSM 06 → Question 1

1 Figure 1 shows the cross section of human skin.

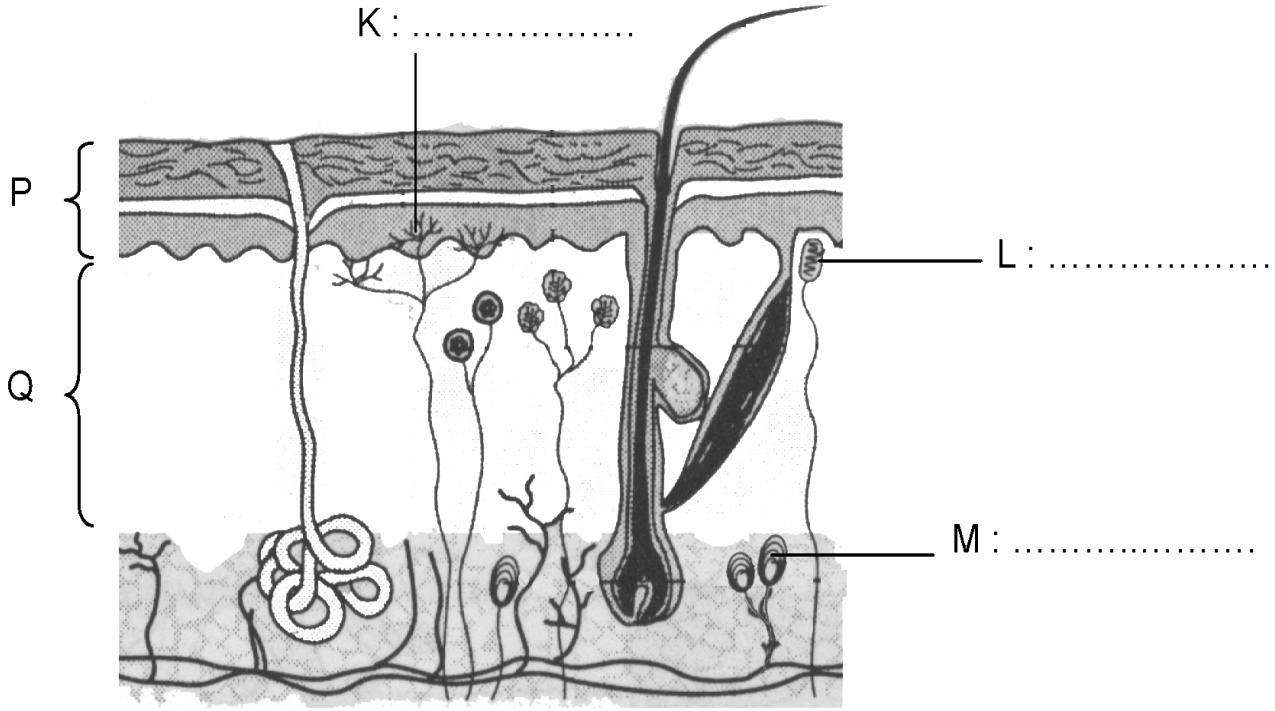


Figure 1

(a) On figure 1, label **three** structures using the following words:

pain receptor	pressure receptor	touch receptor

[3 marks]

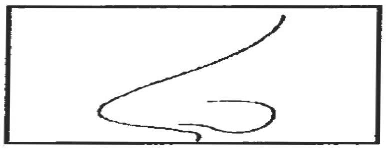
(b) Draw lines to show the correct match between the skin layer and its characteristic.

Skin layer	**Characteristic**
P	Contains receptors, blood capillaries and sweat glands
Q	Made up of fat cells
	Made up of dead cells

[2 marks]

MELAKA 08 → Question 1

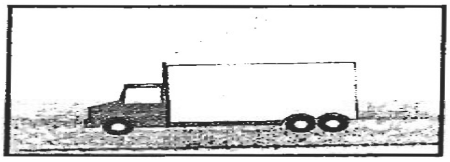
1. (a) Diagram 1.1 shows examples of sensory organs and their stimuli. Draw lines to match each types of sensory organ with its stimulus.
(Rajah 1.1 menunjukkan contoh organ deria dan rangsangannya. Padankan setiap organ deria dan rangsangannya.)



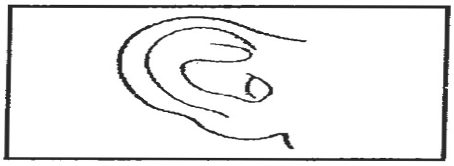
Nose
(Hidung)

Hot kettle
(Cerek panas)

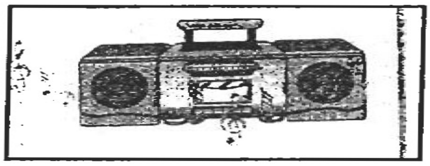
Hand
(Tangan)



Garbage lorry
(Lori sampah)



Ear
(Telinga)



Radio
(Radio)

Diagram 1.1
(Rajah 1.1)

[3marks]

b) Diagram 1.2 shows the different areas of the human tongue.
(Rajah 1.2 menunjukkan perbezaan kawasan pada lidah manusia)

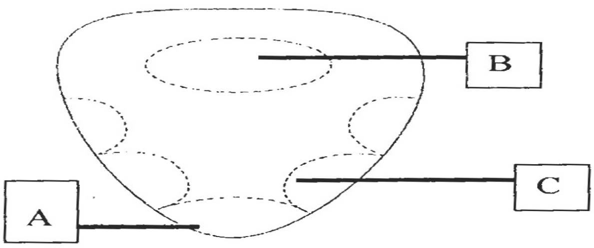


Diagram 1.2
(Rajah 1.2)

Based in the Diagram 1.2 , write the correct **letter** in the given boxes.
(Berdasarkan rajah 1.2, tuliskan abjad yang betul pada kotak yang diberi)

Part *(Bahagian)*	Types of food *(Jenis makanan)*
	Chocolate *(coklat)*
	Bitter gourd *(peria)*
	Dried fish *(ikan kering)*

[3marks]

PERAK 08 → Question 1

1. Diagram 1 shows the structure of the human ear.
Rajah 1 menunjukkan struktur telinga manusia.

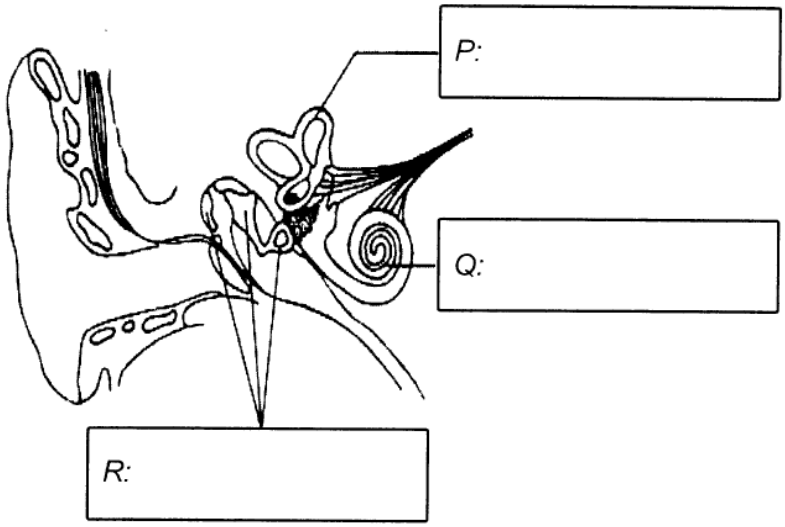


Diagram 1
Rajah 1

(a) On Diagram 1, label structures **P, Q** and **R** using the following words.
*Dengan menggunakan perkataan di bawah, labelkan struktur **P, Q** dan **R** pada Rajah 1*

Semicircular canal *Salur separa bulat*	Cochlea *Koklea*	Ear ossicles *Tulang osikel*

[3 marks]

(b) Draw lines to match each structure with its functions.
Lukis garisan untuk memadankan setiap struktur dengan fungsi masing-masing.

Structure *Struktur*	Function *Fungsi*
Q	Amplifies sound waves *Menguatkan gelombang bunyi*
R	Controls the balance of the body *Mengawal keseimbangan badan*
	Convert sound vibration to nerve impulses *Menukarkan getaran bunyi kepada impuls saraf*

[2 marks]
[2 markah]

(c) State **one** of the devices to overcome the defect of hearing.
*Nyatakan **satu** alat yang digunakan untuk mengatasi kecacatan pendengaran.*

.....

[1 mark]
[1 markah]

N.SEMBILAN 08 → Question 1

1 Diagram 1 shows the cross section of the human ear.

Rajah 1 *menunjukkan keratan rentas telinga manusia.*

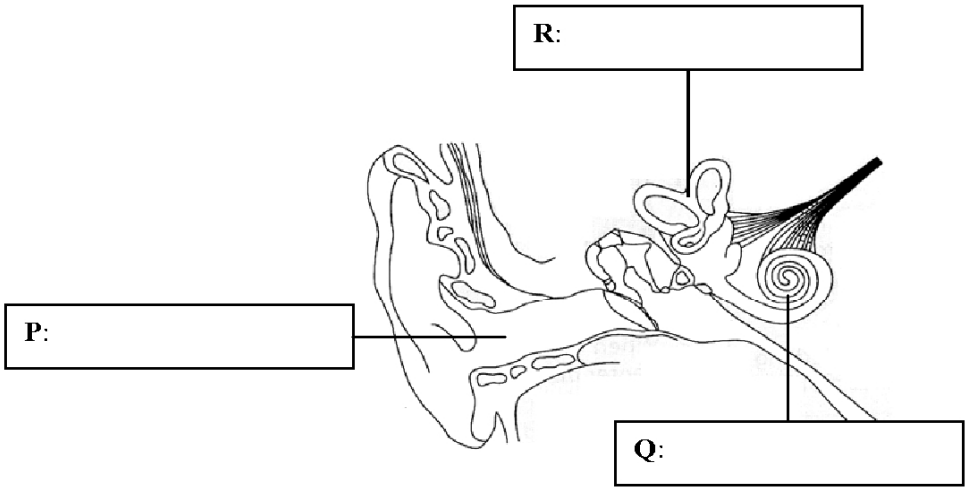


Diagram 1
Rajah 1

(a) On Diagram 1, label parts **P**, **Q** and **R** using the following words.

cochlea	semicircular canal	auditory canal

[3 *marks*]

(b) Draw lines to match the structure **P**, **Q** and **R** with its function.

Lukis garisan untuk memadankan struktur **P**, **Q** *dan* **R** *dengan fungsinya.*

Structure ***Struktur***	**Function** ***Fungsi***
	Transmits sound waves to the eardrum *Menghantar gelombang bunyi ke gegendang telinga*
P	
	Detects and changes sound vibrations into impulses *Mengesan dan mengubah getaran bunyai kepada impuls*
Q	
	Collects and directs sound waves into auditory canal *Mengumpul dan mengarahkan gelombang bunyi ke salur auditori*
R	
	Helps to balance the body *Membantu mengimbangi badan*

[3 *marks*]

PERAK 07 → Question 1

Diagram 1 shows the structure of the human ear.

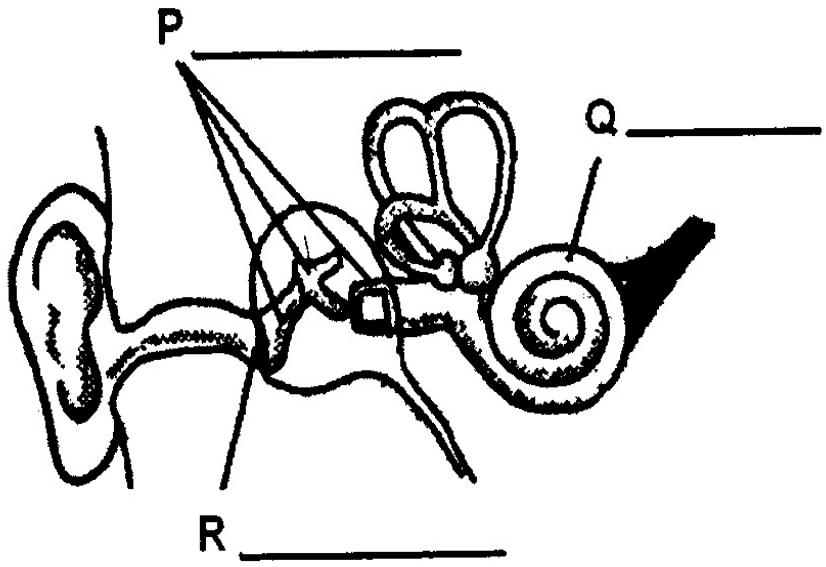


DIAGRAM 1

(a) Label the parts **P, Q** and **R** in Diagram 1 using the following words.

Ossicles	Cochlea	Eardrum

(3 marks)

(b) State the function of **Q**.

.....

(1 mark)

(c) The following sequence shows the path of the hearing mechanism.

Oval window ⟶ Cochlea ⟶ **X** ⟶ Brain

Mark the position of **X** in Diagram 1.

(1 mark)

(d) Name the structure of the ear, which helps in balancing the body

.....

(1 mark)

MRSM 07 → Question 1

Diagram 1 shows the structure of the human ear.

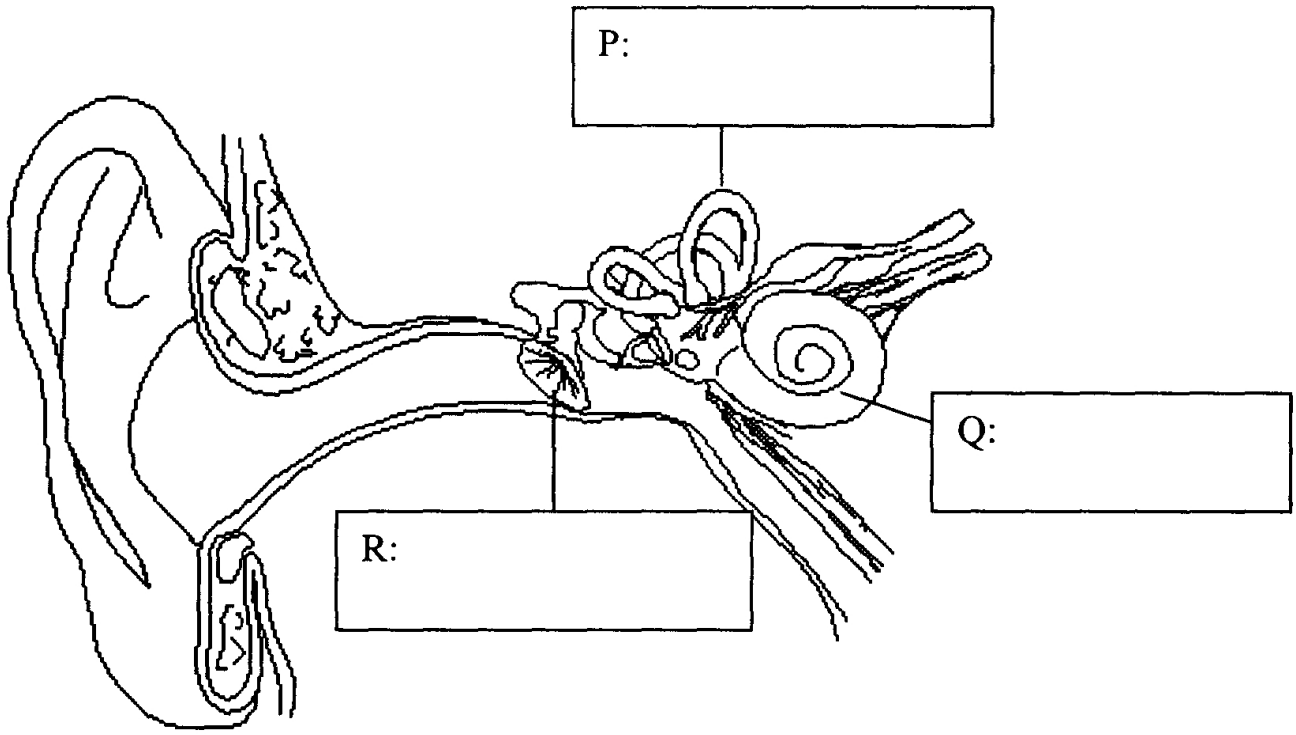


DIAGRAM 1

(a) On Diagram 1, label the structures P, Q and R using the following words.

Ear drum	Semicircular canal	Cochlea

[3 marks]

(b) State the function of any **two** of the structures in 1(a).

… .....

… .....

[2 marks]

JOHOR 06 → Question 3

3. Figure 3.1 shows a cross section of a human's ear..

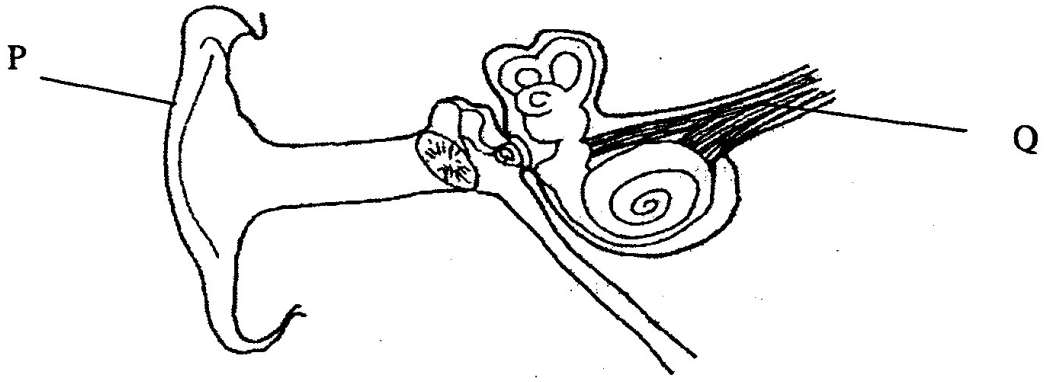


FIGURE 3.1

a) Label Figure 3.1 using the following words.:

Eardrum	Cochlea

[2 marks]

b) State the function of P and Q.

P : .....

Q : .....

[2 marks]

c)

FIGURE 3.2

Name the parts in human's ear that involved in the activity shown in Figure 3.2

i) .....

ii) .....

[2 marks]

KELANTAN 07 → Question 1

1 Diagram 1 shows the cross section of the human ear
Rajah 1 menunjukkan keratan rentas telinga manusia

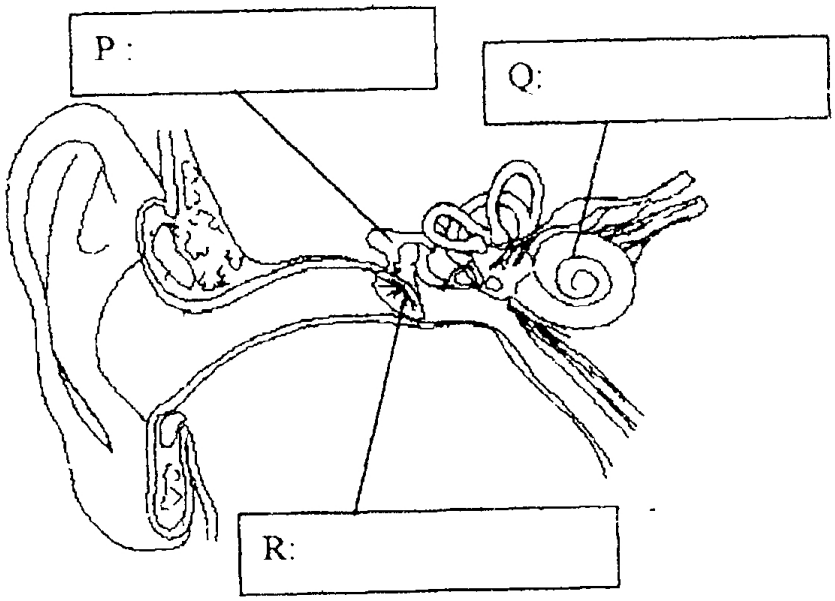


Diagram 1
Rajah 1

(a) On Diagram 1, label the structures using the following words.
Pada rajah 1, labelkan bahagian-bahagian dengan perkataan berikut

Ear drum *Gegendang telinga*	Cochlea *Koklea*	Ear canal *salur telinga*	Ossicles *Osikel*

[3 marks]

(b) State **one** function for any **two** structures labeled on Diagram 1.
*Nyatakan **satu** fungsi bagi mana-mana **dua** bahagian yang berlabel dalam Rajah 1.*

(i) .....

(ii) .....

[2 marks]

KLANG 06 → Question 1

1 Figure 1 shows the cross section of the human ear.

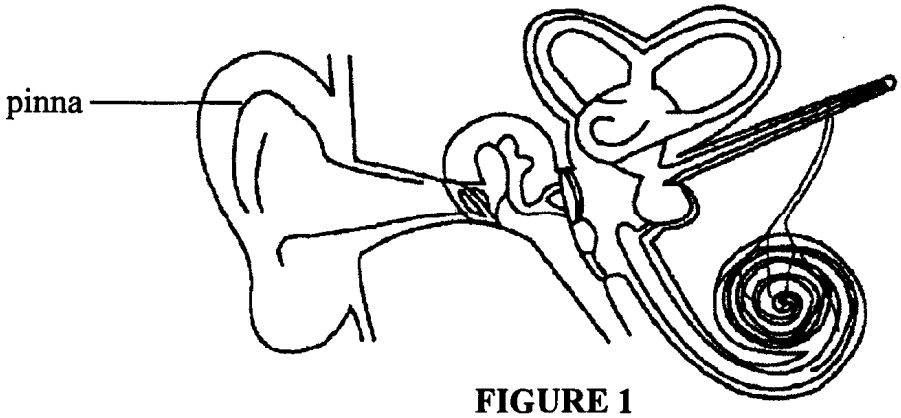


FIGURE 1

a) Label **two** of the following structures in Figure 1.

Cochlea	Eardrum	Oval window

[2 *marks*]

b) X sends the nerve impulses to the brain. Label the X in Figure 1.

[1 *mark*]

c) Draw lines to show the correct match between the structures and their functions. Draw the lines as shown.

Structure	**Function**
Ossicles	Converts the sound waves into nerve impulses.
Eardrum	Magnifying vibrations
Cochlea	Helps the body maintain its balance.
	Vibrates according to the frequency of the sound waves.

[2 *marks*]

SELANGOR 08 → Question 1

Diagram 1 shows the structure of the human ear.
Rajah 1 menunjukkan struktur telinga manusia.

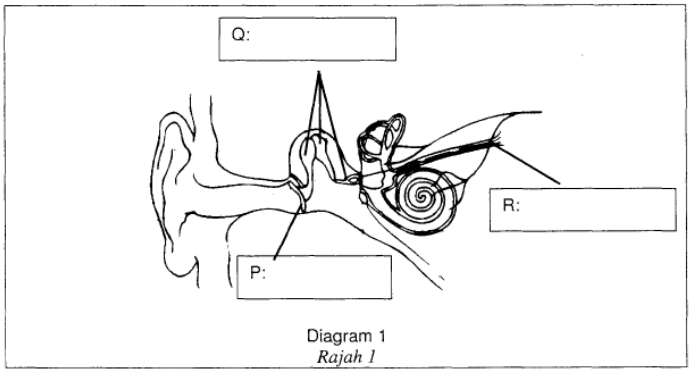


Diagram 1
Rajah 1

(a) Label P, Q and R in Diagram 1 with the following words.
Label P, Q dan R di Rajah 1 dengan perkataan berikut.

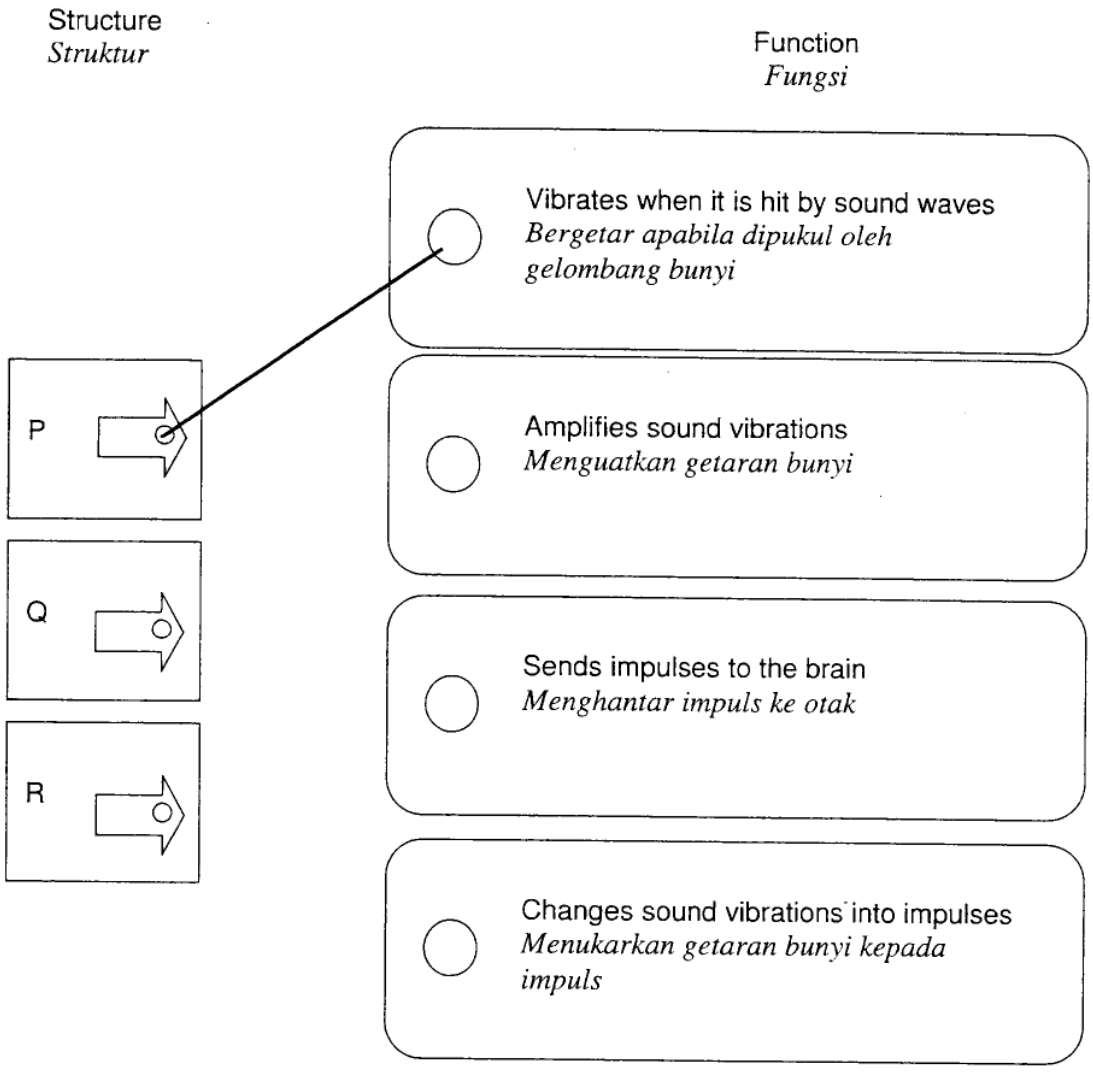
Ossicles *Osikel*	Auditory nerve *Saraf auditori*	Ear drum *Gegendang telinga*

[3 *marks*]
[3 *markah*]

(b) Structure S helps in maintaining body balance. Label S in Diagram 1.
Struktur S membantu keseimbangan badan. Label S di Rajah 1.

[1 *mark*]
[1 *markah*]

(c) Draw lines to match each structure with its functions.
Lukis garisan untuk memadankan setiap struktur dengan fungsi masing-masing.



[2 *marks*]
[2 *markah*]

TERENGGANU 07→Question 1

Diagram 1.1 shows the cross section of a human eye.
Rajah 1.1 menunjukkan keratan rentas mata manusia.

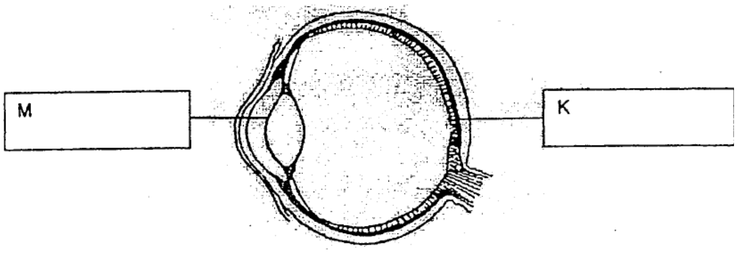


DIAGRAM 1.1
RAJAH 1.1

On Diagram 1.1, label structures K and M using the word in Table 1.2
Pada Rajah 1.1 ,labelkan struktur K dan M menggunakan perkataan dalam Jadual 1.2

Lens *Kanta*	Retina *Retina*	Pupil *Anak mata*

TABLE / *JADUAL* 1.2

[2 mark

b) Complete Diagram 1.3 using the words in Table 1.2 to show how light enters into the eye.
Lengkapkan Rajah 1.3 dengan menggunakan perkataan dalam Jadual 1.2 untuk menunjukkan bagaimana cahaya memasuki mata.

Cornea *Kornea* → [ ] → [ ] → Retina *Retina*

DIAGRAM 1.3
RAJAH 1.3

[2 marks]

c) Draw **one line** to show the correct match between the structures and its function
Lukiskan satu garisan *untuk menunjukkan padanan yang betul antara struktur dan fungsi*

Structures *Struktur*	Functions *Fungsi*
M	Receives light stimulus and sends impulses to brain *Menerima rangsangan cahaya dan menghantar impuls ke*
K	Focuses light *Memfokuskan cahaya*

[2 marks]

KEDAH 06 → Question 1

1. Diagram 1.1 shows the cross section of a human eye.

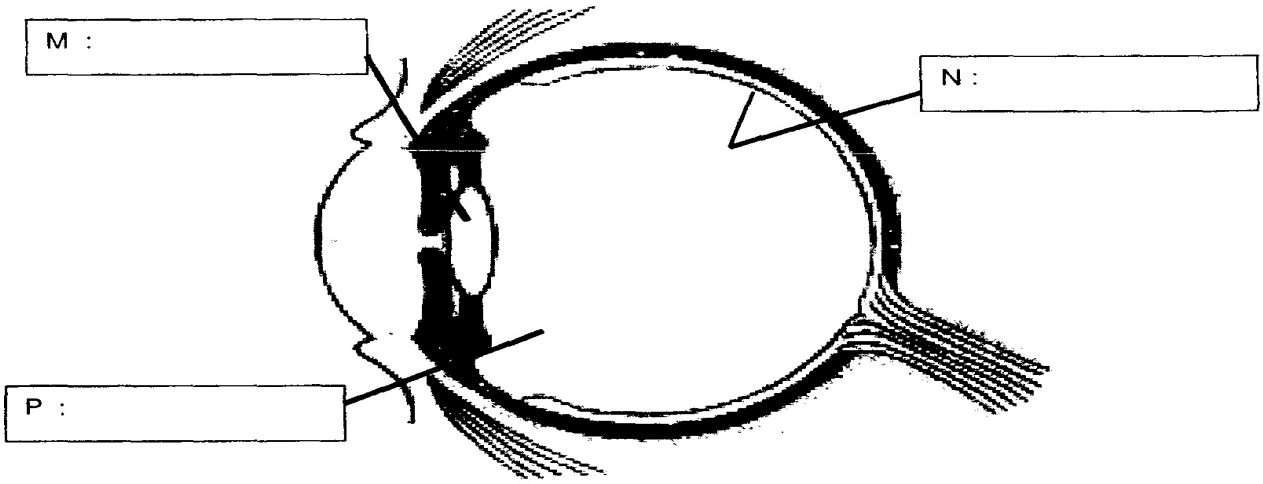


Diagram 1.1

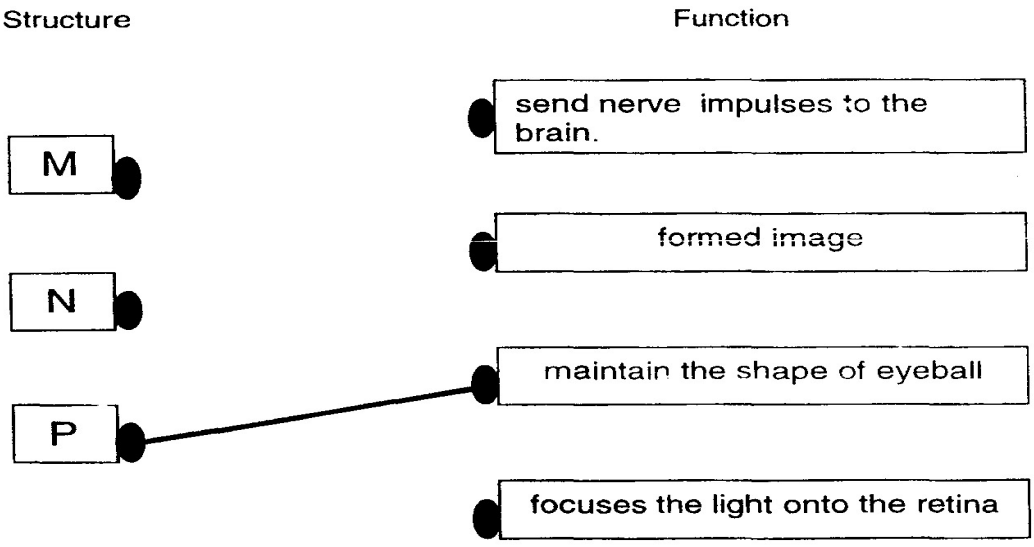
(a) . Label the following structures in Diagram 1.1

Lens	Retina	Vitreous Humour

[3 marks]

(b) Draw lines to show the correct match between the structures with their functions.

Draw the lines as shown below.



[2 marks]

KEDAH 07 → Question 4

Diagram 4.1 shows the structure of human eye.

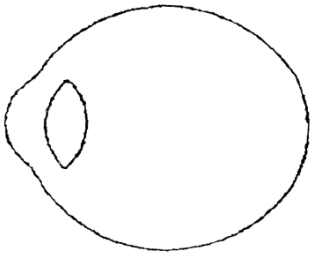


DIAGRAM 4.1

(a) (i) Draw the pathway of light rays of normal sightedness in Diagram 4.1

[2 marks]

(ii) Name the part of the eye on which the image is formed.

_____

[1 *mark*]

(b). Diagram 4.2 shows the defect of vision.

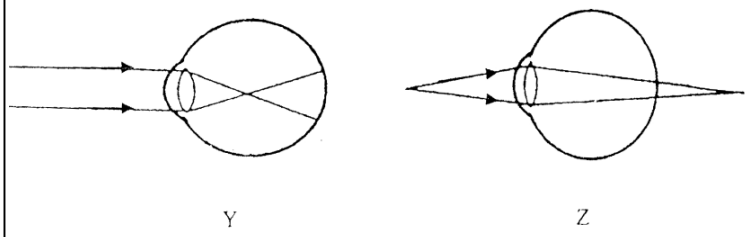


DIAGRAM 4.2

(i). Name the types of defects in :

Y: _____

Z: _____

[2 marks]

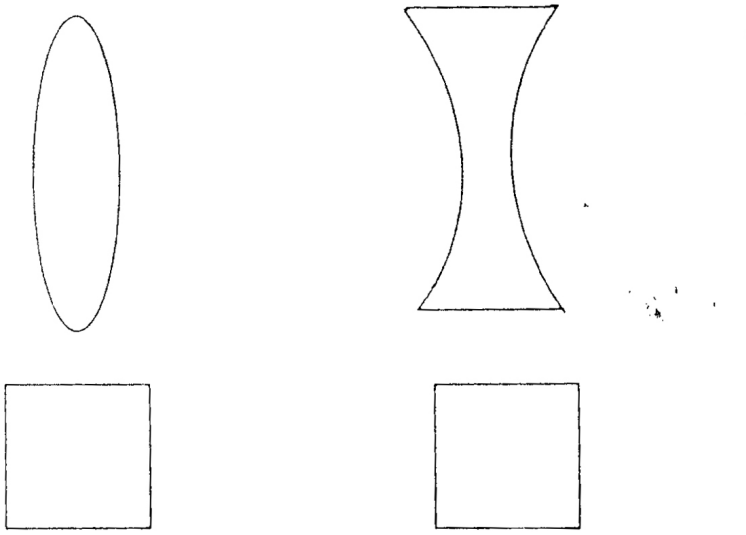
(ii). Give **one** reason that cause the defect in Z.

_____

[1 *mark*]

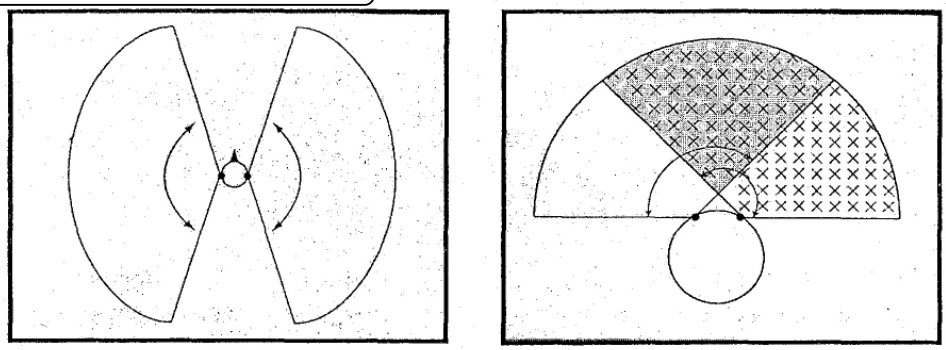
(iii). What type of lens is used to correct the defect in **Y** ?

Choose your answer by mark with (√) in the box below.



[1 mark]

KLANG 07 → Question 5



X : _____ Y : _____

FIGURE 5.1

(a) On Figure 5.1, label type of vision for X and Y.

[2 *marks*]

(b) How are the eyes of the animal positioned in vision X and Y?

X : _____

Y _____

[2 *marks*]

(c) State **one** advantage of having:

(i) Vision X.

_____

(ii) Vision Y.

_____

[2 *marks*]

(d) Figure 5.2 shows pictures of several animals.

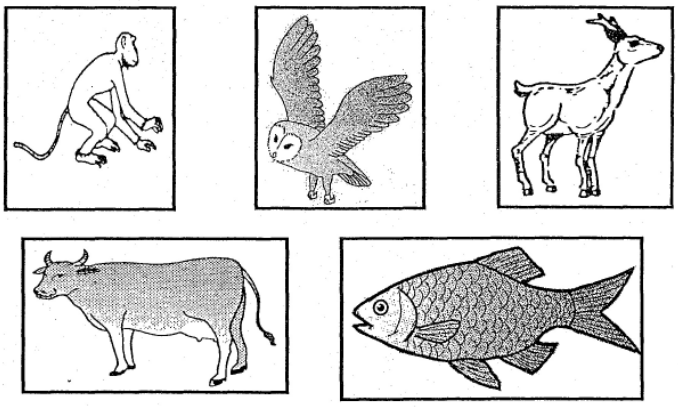


FIGURE 5.2

Based on the pictures, complete the table below by writing the name of animals and state whether they have vision X or Y.

Name of Animal	Type of Vision
Deer	Vision X

[2 *marks*]

PAHANG 07 → Question 3

3. Diagram 3 shows an apparatus to study the response of plant towards external stimuli.

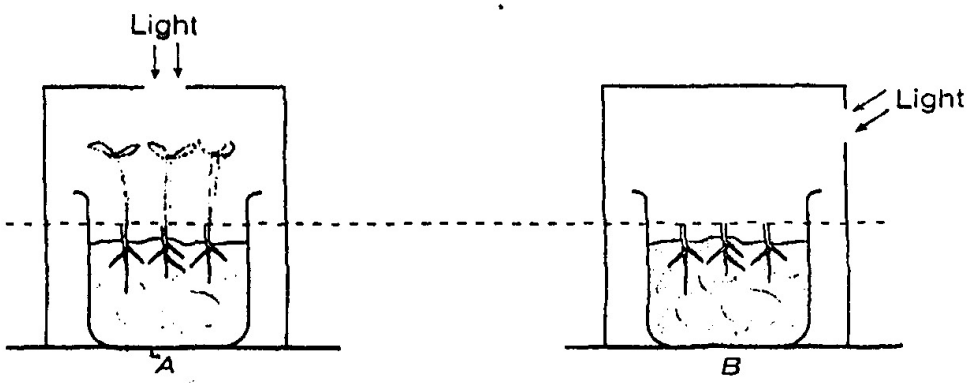


Diagram 3

(a) The two sets of apparatus were placed under the sun for three days.
Draw the direction of growth of the seedling after three days in Figure 3 (B).

[1 mark]

(b) Based on your answer, what stimulus determines the response of the seedlings in the above diagram?

_____

[1 mark]

(c) Which part of plant responds to the stimulus?

_____

[1 mark]

(d) Explain how the type of response of plants in (b) is important to plants.

_____

_____

[2 marks]

N. SEMBILAN 08 → Question 6

6 Diagram 6 shows the response of seedlings towards stimuli.
Rajah 6 menunjukkan gerak balas anak benih terhadap rangsangan.

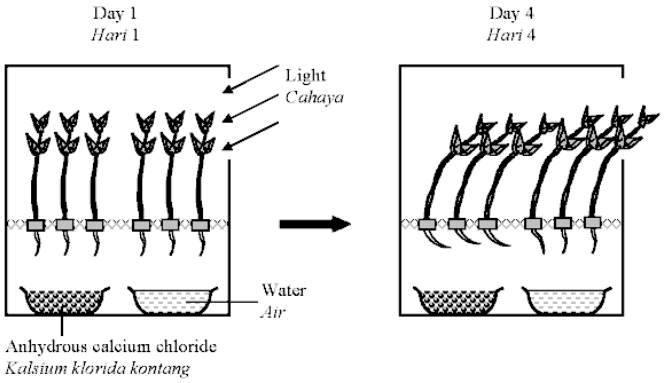


Diagram 6

(a) (i) Name one of the responses shown in Diagram 6.
Namakan satu gerak balas yang ditunjukkan di dalam Rajah 6.

.....
[1 *mark*]
[1 *markah*]

(ii) State the importance of the response you mentioned in **6**(*a*)(*i*).
Nyatakan kepentingan gerak balas yang di sebutkan dalam **6**(*a*)(*i*).

.....
[1 *mark*]
[1 *markah*]

(b) What are the effects of using the following substances?
Apakah kesan penggunaan bahan-bahan berikut?

(i) Anhydrous calcium chloride
Kalsium klorida kontang

.....
[1 *mark*]
[1 *markah*]

(ii) Water
Air

.....
[1 *mark*]
[1 *markah*]

(c)(i) Besides water, name another stimuli that helps the root to grow into the ground.
Selain air, namakan rangsangan lain yang menolong akar tumbuh ke dalam tanah.

.....
[1 *mark*]
[1 *markah*]

(ii) Name the type of response mentioned in **6** (*c*)(*i*).
Namakan jenis gerak balas yang disebutkan di **6** (*c*)(*i*).

.....
[1 *mark*]
[1 *markah*]

(d) Plants absorb water from the ground. What is the main function of water?
Tumbuhan menyerap air dari tanah. Apakah fungsi utama air?

.....
[1 *mark*]
[1 *markah*]

SBP 08 → Question 3

Diagram 3 shows the apparatus set-up to detect the presence of class of food.

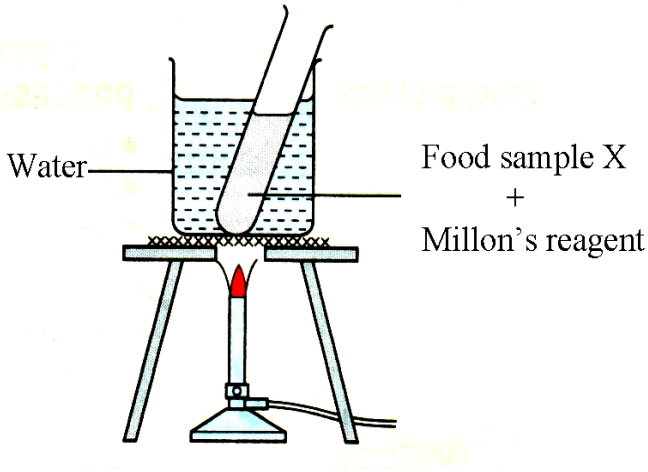


DIAGRAM 3

(*a*) (i) State the class of food that is tested in the above experiment.

.....

[1 *mark*]

(ii) Give an example of food for (*a*)(i).

.....

[1 *mark*]

(*b*) What can be observed happening to the mixture at the end of the experiment?

.....

[1 *mark*]

(*c*) State **one** deficiency disease if a person consumes insufficient amount of the class of food in (*a*)(i).

.....

[1 *mark*]

(*d*) (i) At which part of the human digestive system will this class of food start to be digested?

.....

[1 *mark*]

(ii) Name the end product of digestion for this class of food.

.....

[1 *mark*]

PERLIS 08 → Question 5

5 Diagram 5 shows test conducted for the presence of glucose and protein
Rajah 5 menunjukkan ujian yang dijalankan terhadap kehadiran glukosa dan protein.

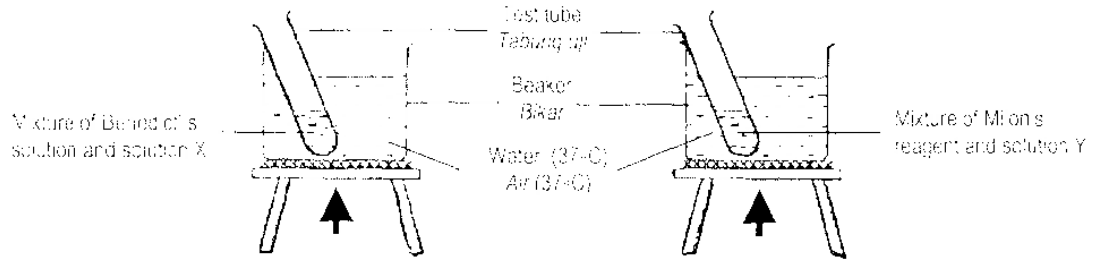


DIAGRAM 5
RAJAH 5

(a) Name the type of food found in solution X and Y if a brick-red precipitate is formed in both mixtures.
Namakan jenis makanan yang terdapat di dalam larutan X dan Y jika mendakan merah bata terbentuk dalam kedua-dua campuran.

(i) *X* : .....

(ii) *Y* : ..... 2 marks]
[2 markah]

(b) In what form does the excess glucose stored in our body?
Apakah bentuk glukosa berlebihan yang disimpan di dalam badan kita?

..... [1 mark]
[1 markah]

(c) State the function of X and Y
Nyatakan fungsi X dan Y

(i) *X* : .....

(ii) *Y* : ..... [2 marks]

(d) What disease will one get if one eats :
Apakah penyakit yang akan dihidapi jika seseorang makan :
(i) Excessive amount of food X:
Makanan X berlebihan :

.....

(ii) Lack of food Y :
Kekurangan makanan Y :

..... [2 marks]
[2 markah]

(e) Which part of alimentary canal absorbs the end products of digested food?
Bahagian salur pencernaan yang manakah menyerap hasil akhir pencernaan?

..... [1 mark]
[1 markah]

PERAK 08 → Question 5

5. Diagram 5.1 shows the human digestive system. **P, Q, R, S** and **T** are the organs involved in the system
*Rajah 5.1 menunjukkan sistem pencernaan manusia. **P, Q, R, S** dan **T** adalah organ-organ yang terlibat dalam sistem tersebut.*

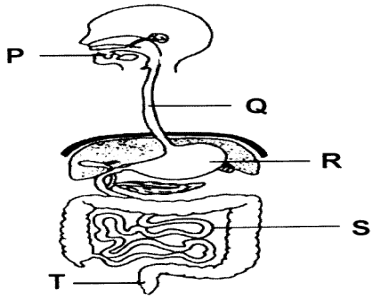
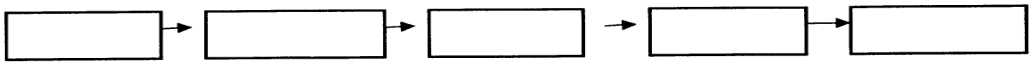


Diagram 5.1
Rajah 5.1

(a) Name the organs **P, Q, R, S** and **T** in the boxes given below to show the sequence in the human digestive system.
*Namakan organ-organ **P, Q, R, S** dan **T** dalam kotak-kotak yang disediakan di bawah untuk menunjukkan urutan dalam sistem pencernaan manusia.*



[2 marks]
[2 markah]

(b) What is happening to the structure Q during the process of peristalsis?
Apa akan berlaku kepada struktur Q semasa proses peristalsis?

.....

[1 mark]
[1 markah]

(c) What are the end products of carbohydrates, proteins and fats in the human digestive system?
Apakah hasil akhir bagi karbohidrat, protein dan lemak dalam sistem pencernaan manusia?

(i) Carbohydrates
Karbohidrat : .....

(ii) Proteins
Protein : .....

(iii) Fats
Lemak : .....

[3 marks]

(d) Diagram 5.2 shows an experiment to investigate the absorption of digested food.
Rajah 5.2 menunjukkan eksperimen untuk menyiasat penyerapan makanan yang dicerna.

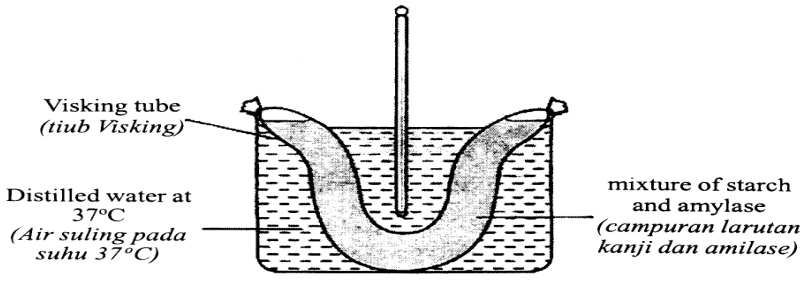


Diagram 5.2
Rajah 5.2

(i) Which part in the experiment represents the small intestine?
Bahagian yang manakah dalam eksperimen mewakili usus kecil?

.....

[1 mark]
[1 markah]

(ii) Explain why the distilled water is kept at 37°C?
Jelaskan mengapa air suling berada pada suhu 37°C?

.....

[1 mark]

MELAKA 08 → Question 5

5. Diagram 5.1 shows a human digestive system.
(Rajah 5.1 menunjukkan sistem pencernaan manusia.)

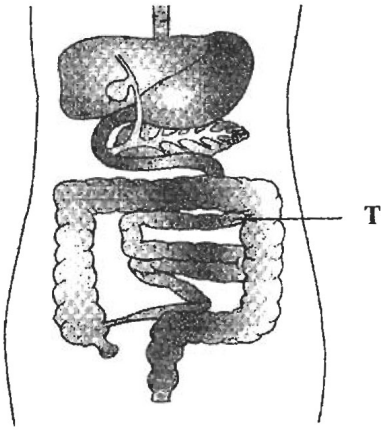


Diagram 5.1
(Rajah 5.1)

a) Label **three** of the following structures in Diagram 5.1
*(Label **tiga** struktur berdasarkan Rajah 5.1)*

Stomach *(Perut)*	Small intestine *(Usus kecil)*	Liver *(Hati)*	Large intestine *(Usus besar)*	Pancreas *(Pankreas)*

[3marks]

b) State **one** function of organ T
*(Nyatakan **satu** fungsi organ T)*

_____

[1mark]

c) A student carried out a food test on sample M. Table 5.1 shows the results of the test.
(Seorang pelajar menjalankan ujian makanan terhadap sample M. Jadual 5.1 menunjukkan keputusan ujian tersebut.)

Food test *(Ujian makanan)*	Observation *(Pemerhatian)*	Food class *(Kelas makanan)*
Sample M is crushed and added with Millon's reagent *(Sample M dihancurkan dan ditambah dengan reagen millon)*		Protein *(Protein)*
Sample M is added with a few drops of iodine solution. *(Sample M ditambahkan dengan beberapa titis larutan iodin.)*		Starch *(Kanji)*

Table 5.1

Complete Table 5.1 by writing the observation obtain from the food test.
(Lengkapkan Jadual 5.1 dengan menulis pemerhatian yang diperolehi dari ujian makanunan tersebut.)

[2marks]

d) Diagram 5.2 shows the sequence of food movement in digestive system.
(Rajah 5.2 menunjukkan susunan pergerakan makanan di dalam system pencernaan.)

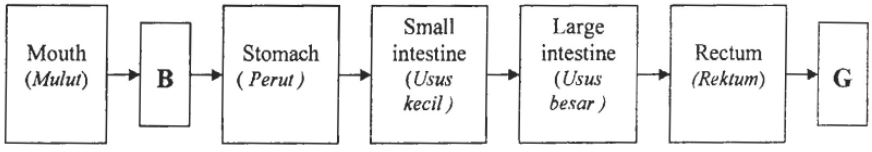


Diagram 5.2
(Rajah 5.2)

What are represent by **B** and **G** in the sequence of food movement above ?
*(Apakah yang di wakili oleh **B** dan **G** dalam pergerakan makanan di atas)*

i) **B** : _____

ii) **G** : _____

[2marks]

PERAK 06 → Question 3

3.

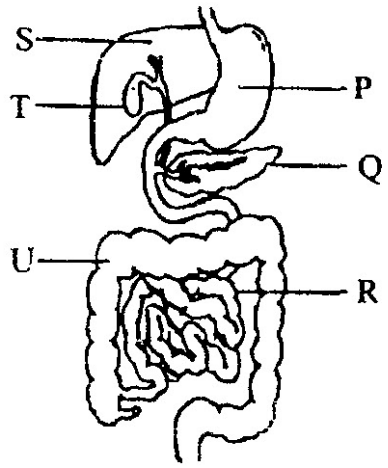


Figure 3

Figure 3 shows part of the human digestive system.

(a) Name the parts labelled P, Q, and R.

P :.....

Q :.....

R :.....

(3 marks)

(b) (i) Name the class of food which is digested in P.

.....

(1 mark)

(ii) Which part of the human digestive system produces bile?

.....

(1 mark)

(c) State the end products of digestion for the following classes of food.

Classes of food	End products of digestion
Carbohydrates	
Proteins	
Fats	

(3 marks)

(d) In which part of the alimentary canal is the end products of digestion absorbed?

.....

(1 mark)

m

K. LUMPUR 08 → Question 3

3. Diagram 3.1 shows an experiment to study the action of saliva on starch. The result of the experiment after 20 minutes is shown in Table 3.1
Rajah 3.1 di bawah menunjukkan satu eksperimen untuk mengkaji tindakbalas air liur ke atas kanji. Keputusan eksperimen selepas 20 minit ditunjukkan dalam Jadual 3.1

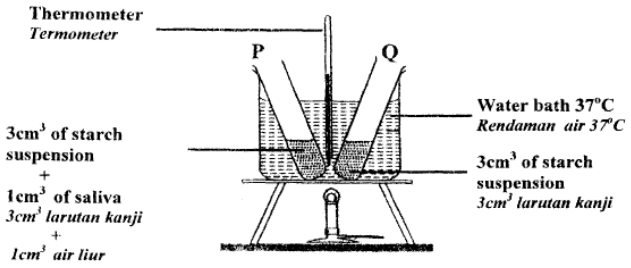


Diagram 3.1
Rajah 3.1

Test tube *Tabung uji*	Presence of starch *Kehadiran kanji*
P	No *(Tiada)*
Q	Yes *(Ada)*

Table 3.1

Based on the Diagram 3.1 and Table 3.1 above answer the following questions.
Berdasarkan Rajah 3.1 dan Jadual 3.1 di atas jawab soalan berikut.

(a) (i) Why must test tubes P and Q be kept in the water bath at 37° C ?
Mengapakah tabung uji P dan Q perlu diletakkan dalam rendaman air pada suhu 37°C ?

_____
[1 mark/*markah*]

(ii) In which part of the human digestive system the same enzyme action occurs as in the test tube R?
Di bahagian manakah dalam sistem pencernaan manusia tindakbalas enzim berlaku seperti dalam tabung uji R?

_____
[1 mark/*markah*]

(iii) Name the gland that secretes saliva
Namakan kelenjar yang merembeskan air liur?

_____
[1 mark/*markah*]

(b) Diagram 3.3 shows food classes and food samples.
Rajah 3.3 menunjukkan kelas makanan dan contoh makanan.

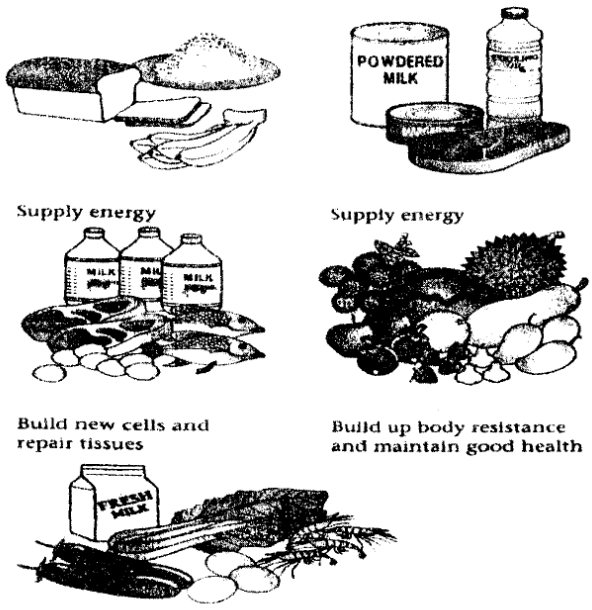


Diagram 3.2
Rajah 3.2

Complete Table 3.2 by writing the food classes and their food samples.
Lengkapkan Jadual 3.2 dengan menulis kelas makanan dan contoh makanan tersebut.

Food classes *Kelas makanan*	Food samples *Contoh makanan*
(i) Fat *Lemak*	Cooking oil, margarine *Minyak masak, marjerin*
(ii)	
(iii)	
(iv)	

Table 3.2
Jadual 3.2

[3marks/ markah]

SELANGOR 08 → Question 3

Diagram 3.1 shows an experiment to test the absorption of digested food. After 10 minutes, the water in the beaker is tested.
Rajah 3.1 menunjukkan susunan radas bagi satu eksperimen. Selepas 10 minit, air dalam bikar diuji.

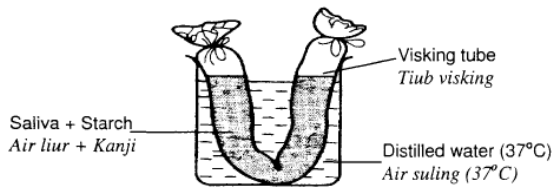


Diagram 3.1
Rajah 3.1

(i) What will diffuse through the visking tube ?
Apakah yang meresap melalui tiub visking ?

.....

[1 *mark*]
[1 *markah*]

(ii) Suggest a reason for your answer in (a) (i).
Beri satu sebab bagi jawapan anda di (a) (i).

.....

[1 *mark*]
[1 *markah*]

(iii) What will happen if the temperature of the distilled water is kept at 60 °C ?
Apakah yang akan berlaku jika suhu air suling berada pada 60 °C ?

.....

[1 *mark*]
[1 *markah*]

(b) Name two solutions used to test the water in the beaker.
Namakan dua bahan uji yang digunakan untuk menguji air di dalam bikar?

(i) .....

(ii) .....

[2 *marks*]
[2 *markah*]

(c) Diagram 3.2 shows some examples from a certain class of food.
Rajah 3.2 menunjukkan beberapa contoh daripada sejenis kelas makanan.

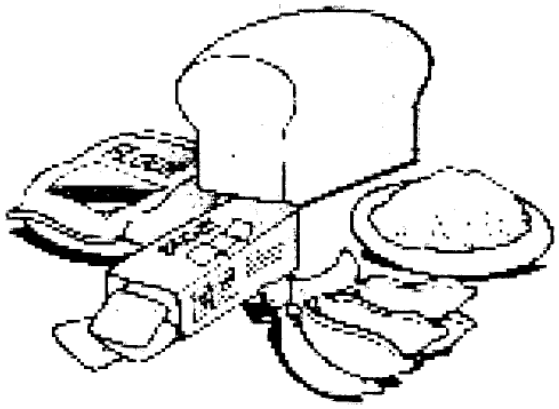


Diagram 3.2
Rajah 3.2

Name the class of food.
Namakan kelas makanan tersebut.

.....

[1 *mark*]
[1 *markah*]

JOHOR 07 → Question 5

5 Figure 5.1 shows the experiment to study the absorption of digested food. Food tests are carried out the samples of distilled water.
Rajah 5.1 menunjukkan eksperimen untuk mengkaji penyerapan makanan yang tercerna. Ujian makanan dilakukan ke atas sampel air suling .

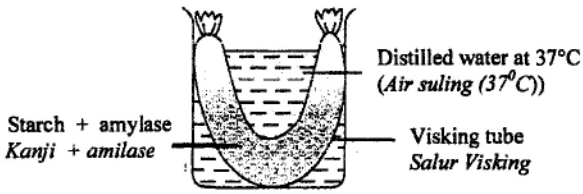


Figure 5.1

The results obtained were tabulated in the table below:
Keputusan direkodkan dalam jadual di bawah:

	Observation *Pemerhatian*	
	Iodine test *Ujian Iodin*	Benedict's solution test *Ujian Benedict*
Beginning *Awal eksperimen*	Brownish *Perang*	Blue *Biru*
After 20 min *Selepas 20 min*	Brownish *Perang*	Brick red precipitate *Mendakan merah bata*

a) Why should the temperature of the distilled water maintained at 37° C ?
Mengapa suhu air suling perlu dikekalkan pada 37° C ?

.....

[1 *mark*]

b) State the purpose of using iodine.
Nyatakan tujuan menggunakan iodin.

.....

[1 *mark*]

c) i) After 20 minutes, what substance is formed in the distilled water?
Selepas 20 minit, apakah bahan yang terhasil di dalam air suling?

.....

[1 *mark*]

ii) Give a reason why the subtance in b(i) can be found in the distilled water?
Beri satu sebab mengapa bahan di b(i) boleh didapati di dalam air suling?

.....

[1 *mark*]

d) In the human body, the
Di dalam badan manusia,

i) visking tube is represented by : ..... [1 *mark*]
Tiub visking diwakili oleh

ii) distilled water is represented by : ..... [1 *mark*]
Air suling diwalkili oleh

PAHANG 08 → Question 2

2 Diagram 2.1 shows the flow of energy in a simple food web.
Rajah 2.1 menunjukkan aliran tenaga dalam satu siratan makanan ringkas.

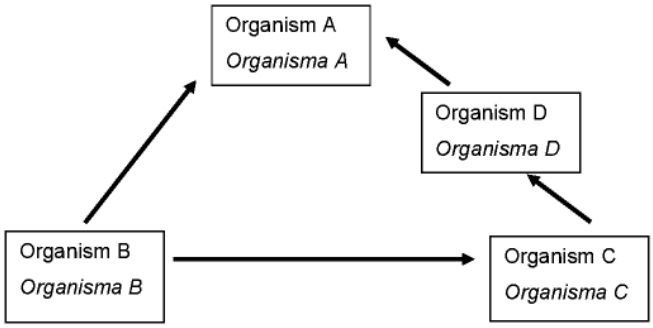


Diagram 2.1

(a) (i) Which organism is the producer?
Organisma yang manakah ialah pengeluar?

……

[1 *mark*]
[1 *markah*]

(ii) Why is the organism mentioned in 2(a)(i) called the producer?
Kenapa organisma yang disebut di 2(a)(i) dikenali sebagai pengeluar?

……

……

[1 *mark*]

(b) Diagram 2.2 shows a food web that consists of several interrelated food chains.
Rajah 2.2 menunjukkan satu siratan makanan yang mengandungi beberapa gabungan rantai makanan.

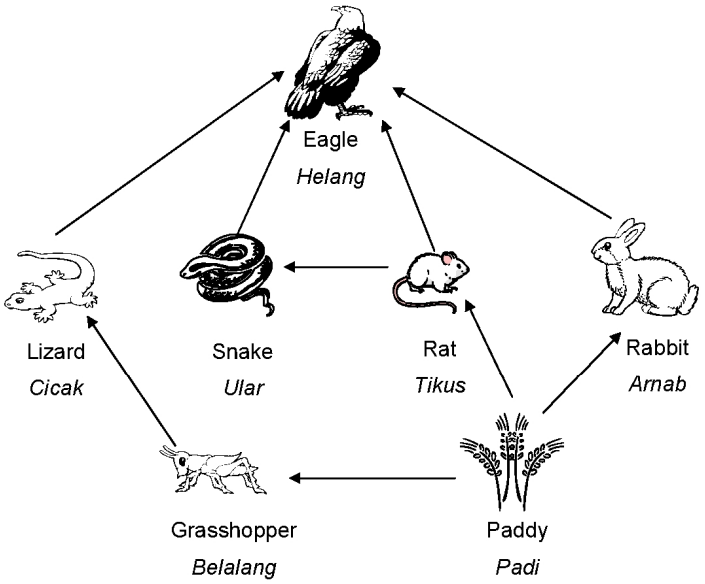


Diagram 2.2
Rajah 2.2

(i) How many food chains are there in the food web shown in Diagram 2.2?
Berapa rantai makanan yang terdapat dalam siratan makanan pada Rajah 2.2?

……
[1 *mark*]
[1 *markah*]

(ii) Give **one** example of food chain that you can find in the food web in Diagram 2.2.
*Beri **satu** contoh rantai makanan yang terdapat dalam siratan makanan dalam Rajah 2.2.*

……
[1 *mark*]

(c) What will happen if an extreme drought season wipes out most of the paddy plants?
Apa akan berlaku jika satu musim kemarau menghapuskan semua pokok padi?

…… ……

……
[1 *mark*]
[1 *markah*]

(d) Predict what will happen if the population of rats is suddenly increased.
Ramalkan apa akan berlaku jika populasi tikus bertambah dengan tiba-tiba.

……

……
[1 *mark*]
[1 *markah*]

(e) What is the source of energy for the food chain and the food web?
Apakah sumber tenaga bagi rantai dan siratan makanan ini?

……
[1 *mark*]
[1 *markah*]

K. LUMPUR 07 → Question 6

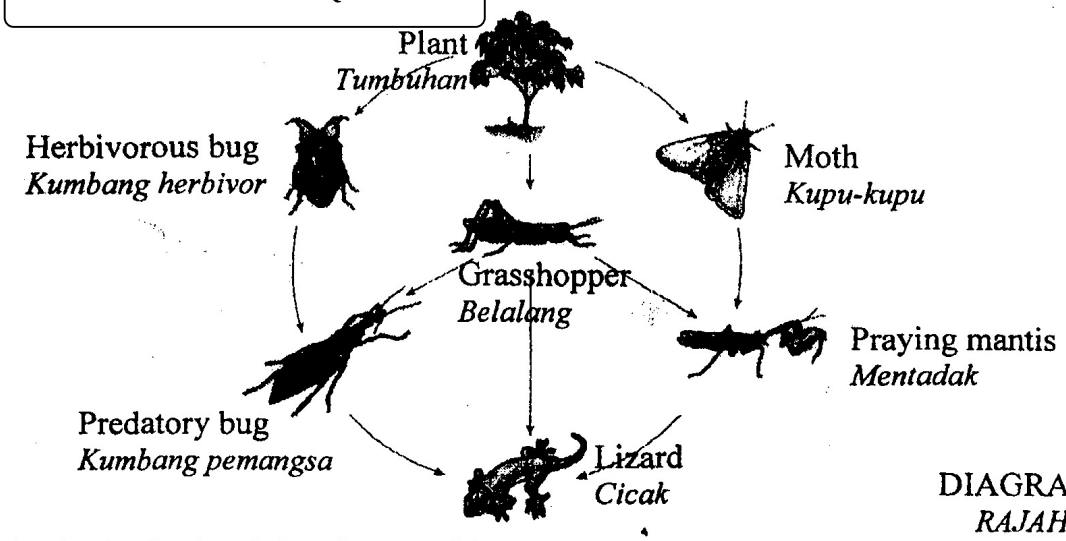


DIAGRAM 6.0
RAJAH 6.0

6. Study the food web in Diagram 6.0.
Kaji siratan makanan dalam Rajah 6.0.

(a) Construct **two** food chains with three or four links.
*Bina **dua** rantai makanan yang mengandungi tiga atau empat hubungan.*

1. .....

2. .....

[2 marks/ *markah*]

(b) Name the main source of energy in the food web above.
Namakan sumber tenaga utama dalam siratan makanan di atas.

.....

[1 marks/ *markah*]

(c) Name the tertiary consumer in the food web.
Namakan pengguna ketiga dalam siratan makanan itu.

.....

[1 marks/ *markah*]

(d) State the interaction between grasshopper and lizard.
Nyatakan hubungan antara belalang dengan cicak.

.....

[1 marks/ *markah*]

(e) Which organism removes carbon dioxide from the air?
Organisma yang manakah menyingkirkan karbon dioksida daripada udara?

.....

[1 marks/ *markah*]

(f) Predict what happens when the plants in the food web die.
Ramalkan apa yang akan berlaku apabila tumbuhan dalam siratan makanan mati.

.....

[1 marks/ *markah*]

TERENGGANU 06 →Question3

Figure 3.1 shows the number of four type of organisms P,Q,R and S in a habitat

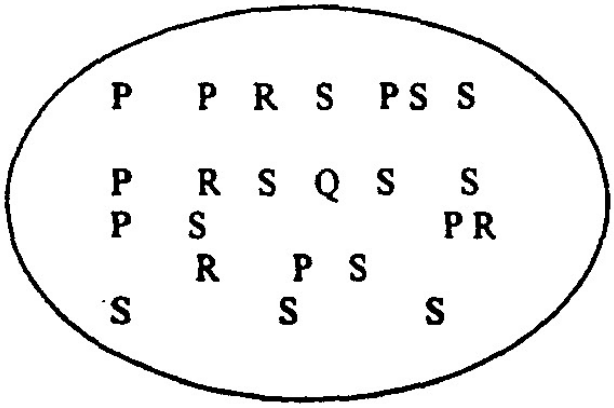


FIGURE 3.1

a) **What is the meaning of 'community'?**

.....

(1 mark)

b) **Based on Figure 3.1, complete the pyramid number below using the given letters.**

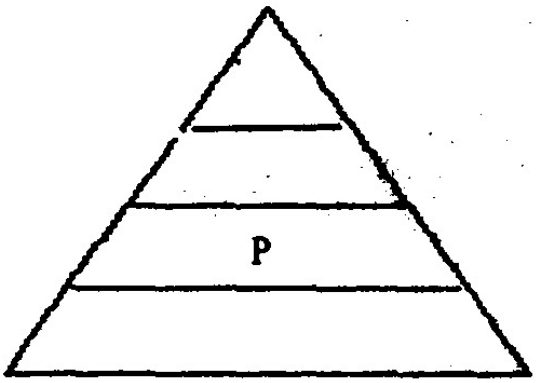


FIGURE 3.2

(2 marks)

c) **Which group of organism are (answer in letter) :**

i) **producer :.....**

ii) **Secondary consumer :.....**

(2 marks)

d) **Energy flow decreases in ascending order of the number of pyramid. Explain**

.....

.....

(1 mark)

SELANGOR 06 → Question 2

Diagram 2 shows a pyramid number.

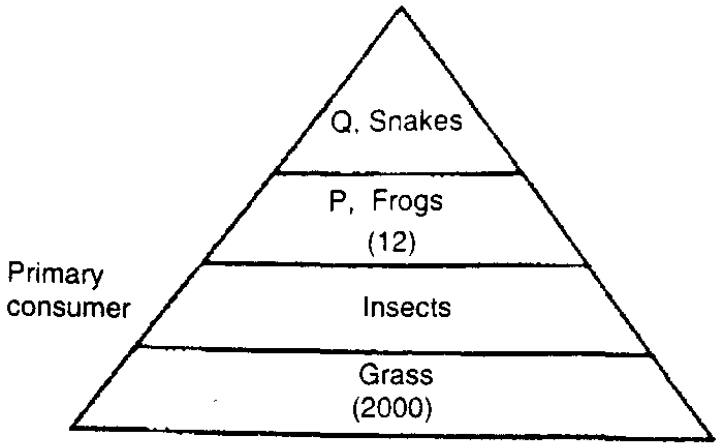


DIAGRAM 2

(a) State the type of consumers represented by P and Q in Diagram 2. Choose the words from the box below

Producer	Secondary consumer	Tertiary consumer

P : _____

Q : _____

[2 marks]

(b) The estimated numbers of some of the organisms in the community are shown in Diagram 2.

Circle the number given in the box below to estimate the number of insects.

2050	200	3

[1 mark]

(c) What will happen if the grass is partly destroyed?

_____

[1 mark]

(d) (i) Why is the grass classified as producers?

_____

[1 mark]

(ii) Complete the food chain by naming another consumer, other than the frogs.

grass → insects → [ ] → snake

[1 mark]

KEDAH 08 → Question 3

3. Diagram 3 shows pictures of a group of animals.
Rajah 3 di bawah menunjukkan gambar sekumpulan haiwan.

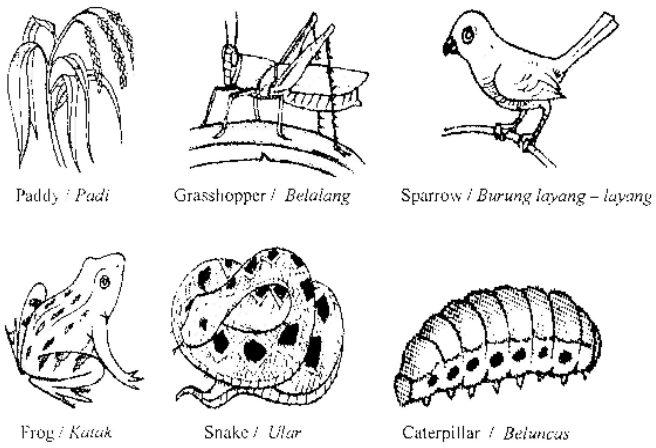


Diagram 3

(a) Based on Diagram 3, construct a food web.
Berdasarkan gambar dalam rajah 3, bina satu siratan makanan

[2 marks]

(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]

(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]

ii. State one natural method which control the population of the pest ?
Namakan satu kaedah untuk mengawal populasi organisma perosak secara semulajadi.

.....

[1 mark]

(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]

(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]

KELANTAN 06 → Question 4

4. Figure 4 shows a Food web.

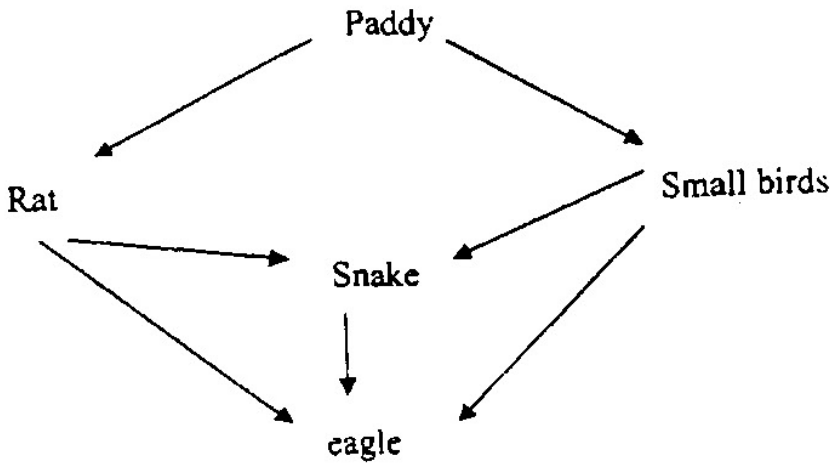


Figure 4

a) Based on figure 4 , state one example of:-

I. Primary Consumer : _____ (1 mark)

II. Secondary Consumer : _____ (1 mark)

III. Tertiary Consumer : _____ (1 mark)

b) Build a food chain from the food web above:

_____ (1 mark)

c) What will happen if :

i) The population of rat increases

_____ (1 mark)

ii) The population of eagle increases

_____ (1 mark)

d) Give one example of pest found in the food web

_____ (1 mark)

e) State one method to control pest without involving the environment.

_____ (1 mark)

KEDAH 06 → Question 3

3. Diagram 3.1 shows a type of interaction.

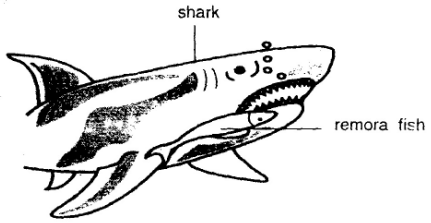


Diagram 3.1

(a) Name the type of interaction between the organisms.

.....

[1 mark]

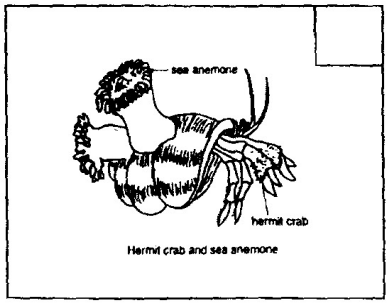
(b) Based on the Diagram 3.1 , state **one** characteristics of these interaction.

.....

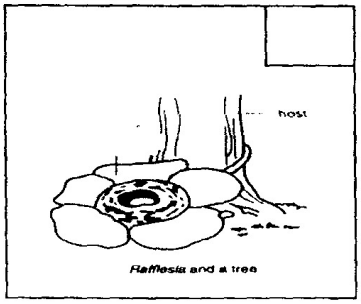
.....

[1 mark]

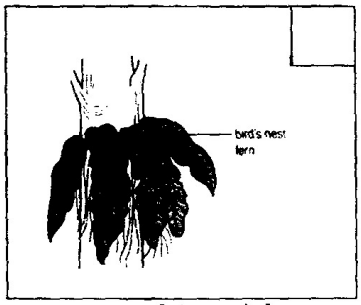
(c) Based on Diagram 3.2 , choose **one** interaction that has the same interaction as Diagram 3.1.
Mark (•) in the box for the interaction.



Hermit crab and sea anemone



Rafflesia and a tree



[1 mark]

Diagram 3.2

d) Diagram 3.3 shows an interaction between two organisms.

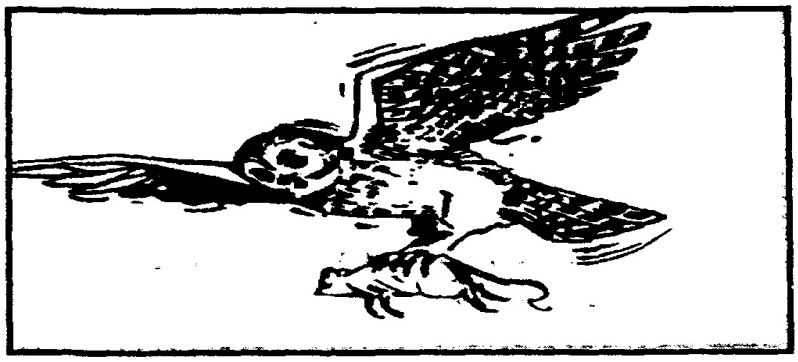


Diagram 3.3

i. On Diagram 3.3 , state one usage of this interaction ?

.....

[1 mark]

ii. State **two** advantages based on your answer in (d)(i).

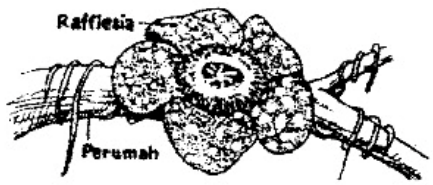
1. .....

2. .....

[2 marks]

KELANTAN 08 → Question 4

Diagram 4 shows a type of interaction among living organisms.
Rajah 4 menunjukkan satu jenis interaksi di kalangan benda hidup.



Rafflesia and a tree
Rafflesia dan sebatang pokok

Diagram 4.1

(a) Name the type of the interaction between the organisms.
Namakan jenis interaksi di kalangan organisma-organisma tersebut.

_____
[1 mark]

(b) Based on Diagram 4.1, state one disadvantage of this type of interaction.
Berdasarkan Rajah 3.1 , nyatakan satu keburukan interaksi jenis ini.

_____
[1 mark]

(c) Based on Diagram 4.1, give one other example of the same type of interacti
Berdasarkan Rajah 4.1, berikan satu contoh lain interaksi jenis ini.

_____
[1 mark]

(d) Diagram 4.2 shows another type of interaction between two organisms.
Rajah 4.2 menunjukkan satu lagi jenis interaksi di antara dua organisma.

Diagram 4.2
Rajah 4.2

(i) Based on Diagram 3.2, state **one** method of this interaction in agriculture.
*Berdasarkan Rajah 3.2, nyatakan **satu** kaedah interaksi ini dalam bidang pertanian.*

_____
[1 mark]

(ii) Give **two** advantages of the methods of the interaction in d(i).
*Berikan **dua** kebaikan kaedah interaksi dalam d(i)*

1. _____

2. _____
[2 marks]

MRSM 06 → Question 4

Figure 4.1 shows an experiment carried out by a group of students.

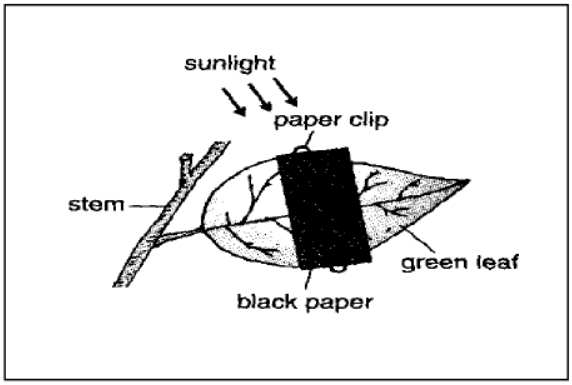


Figure 4.1

(a) (i) What is the aim of the experiment.

.....

.....

.....

[1 mark]

(ii) Why is part of the leaf covered with black paper?

.....

.....

.....

[1 mark]

(b) Figure 4.2 shows the steps taken to test the presence of starch in the leaf.

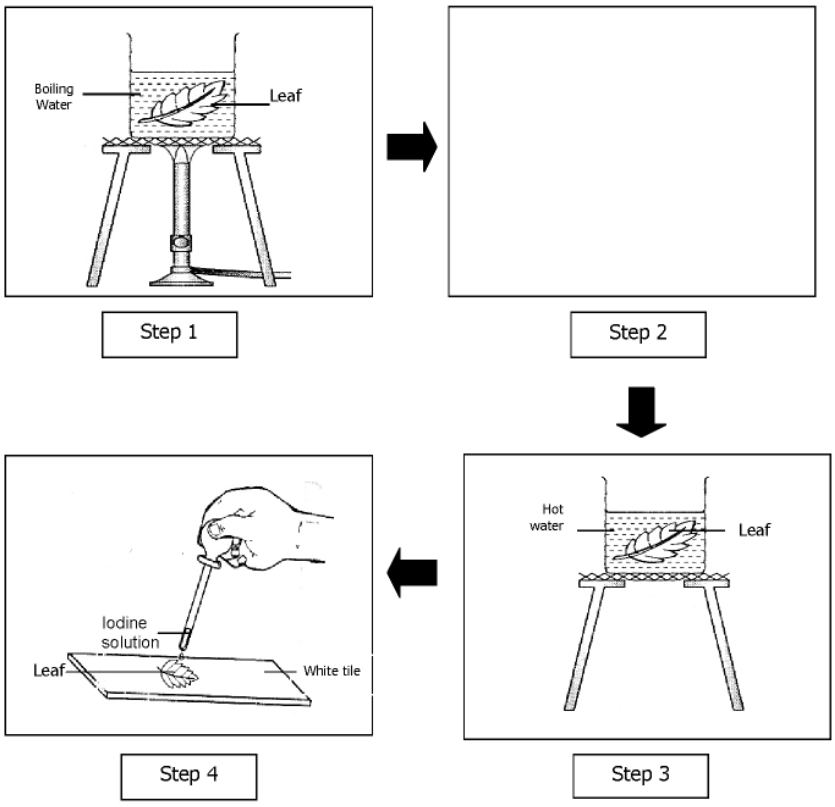


Figure 4.2

(i) Draw the set up of apparatus for **step 2** in the space provided in Figure 4.2.

[2 marks]

(ii) What is the purpose of step 2?

.....

.....

.....

[1 mark]

(c) Explain how photosynthesis helps to maintain a balanced ecosystem.

.....

.....

.....

[1 mark]

KEDAH 08 → Question 5

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.

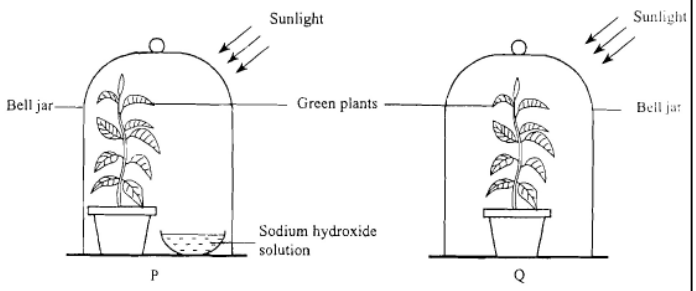


Diagram 5.1

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

.....

.....

[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]

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.

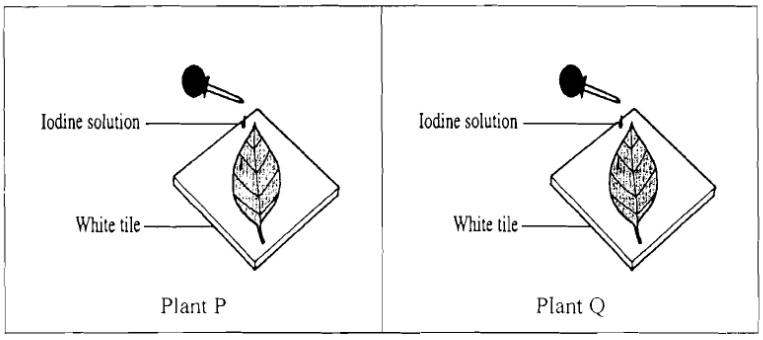


Diagram 5.2

i. Which of the leaf will change to dark blue ?
Daun manakah yang akan bertukar kepada biru gelap ?

.....

[1 mark]

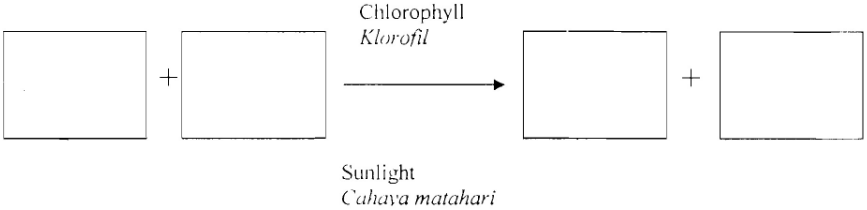
ii . Explain your answer in c (i).
Terangkan jawapan anda di c (i).

.....

.....

[1 mark]

(d) Complete the word equation for the process of photosynthesis
Lengkapkan persamaan perkataan untuk proses fotosintesis .



[3 marks]

TERENGGANU 08→Question 1

Diagram 1 shows some examples of the method used to separate some matter.
Rajah 1 menunjukkan contoh-contoh kaedah yang digunakan untuk memisahkan jirim tertentu.

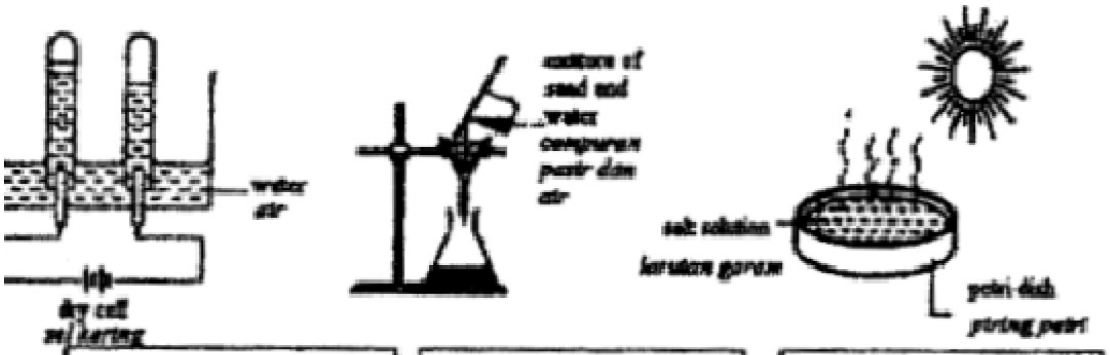


Diagram 1 / *Rajah 1*

(a) On Diagram 1, label the method of separation P, Q and R using following words.
Pada Rajah 1, label kaedah pengasingan bagi P,Q dan R menggunakan perkataan berikut.

Evaporation *Penyejatan*	Filtration *Penurasan*	Electrolysis *Elektrolisis*

[3 marks]

(b) Draw lines to show the correct match between the method of separation and their uses.
Lukiskan garisan untuk menunjukkan padanan yang betul antara kaedah pengasingan dan kegunaan masing-masing.

Separation method *Kaedah Pengasingan*	Uses *Kegunaan*
P	To separate an insoluble solid from liquid *Mengasingkan bahan pepejal tak terlarut dari cecair*
Q	To breakdown the compound into its elements *Menguraikan sebatian kepada unsur-unsurnya*
R	To separate a dissolved solid from a liquid *Mengasingkan bahan pepejal terlarut dari cecair*

[3 marks]

PERAK 08 → Question 3

3. Diagram 3.1 shows the physical changes in water.
Rajah 3.1 menunjukkan perubahan fizikal dalam air.

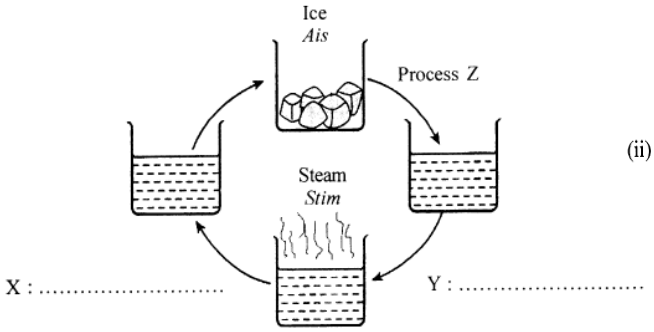


Diagram 3.1
Rajah 3.1

(a) State the process **X** and the process **Y** on Diagram 3.1 to show the physical changes in state of matter for water using the following information.
*Nyatakan proses **X** dan proses **Y** pada Rajah 3.1 untuk menunjukkan perubahan fizikal dalam keadaan jirim bagi air menggunakan maklumat berikut.*

Freezing	Boiling	Condensation
Pembekuan	*Pendidihan*	*Kondensasi*

[2 marks]

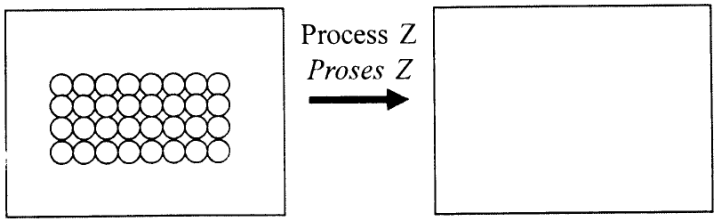
(b) (i) State **one** of the properties of pure water.
*Nyatakan **satu** sifat air tulen.*

.....
[1 mark]

(ii) What is the effect of the impurities to the boiling point of water?
Apakah kesan benda asing di dalam air kepada takat didih air?

.....
[1 mark]

(c) (i) Diagram 3.2 shows the changes in the arrangement of particles of the water molecules from Situation A to Situation B after Process Z. Draw the arrangement of particles of the water molecules in Situation B in the box given.
Rajah 3.2 menunjukkan perubahan susunan zarah-zarah molikul air dari Situasi A kepada Situasi B. Lukis susunan zarah-zarah molikul air dalam situasi B di dalam kotak yang disediakan.



Situation A
Situasi A

Situation B
Situasi B

Diagram 3.2
Rajah 3.2

[1 mark]
[1 markah]

(ii) State the difference between the particles in Situation A and Situation B in Diagram 3.2?
Nyatakan perbezaan di antara zarah-zarah dalam Situasi A dan Situasi B dalam Rajah 3.2?

.....
[1 mark]
[1 markah]

(iii) State whether heat is absorbed or released during process Z.
Nyatakan sama ada haba diserap atau dibebaskan semasa proses Z.

.....
[1 mark]

KLANG 06 → Question 6

6 Figure 6 shows an experiment on water purification that has been carried out.

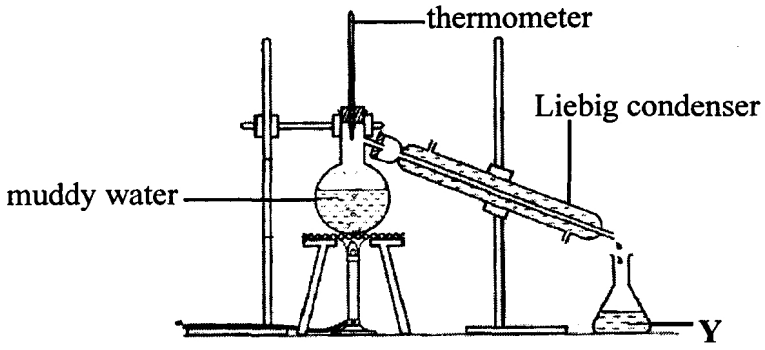


FIGURE 6

(a) Name the above process.

_____

[1 *mark*]

(b) On Figure 6, draw an arrow to show the direction of water coming in and water going out from the Liebig condenser.

[1 *mark*]

(c) What is the function of the Liebig condenser?

_____

[1 *mark*]

(d) Name the process which occurs in the Liebig condenser.

_____

[1 *mark*]

(e) Name the liquid **Y**.

_____

[1 *mark*]

(f) Why is liquid **Y** not suitable for drinking?

_____

[1 *mark*]

(g) State **one** difference between liquid **Y** and filtered water.

_____

[1 *mark*]

(h) Give **two** changes in the state of matter in this activity.

(i) _____

(ii) _____

[2 *marks*]

MRSM 08 → Question 5

5. Diagram 5.1 shows the percentage of gases J, K, L, M and N in the atmosphere.
Rajah 5.1 menunjukkan peratusan gas-gas K, L, M dan N dalam atmosfera.

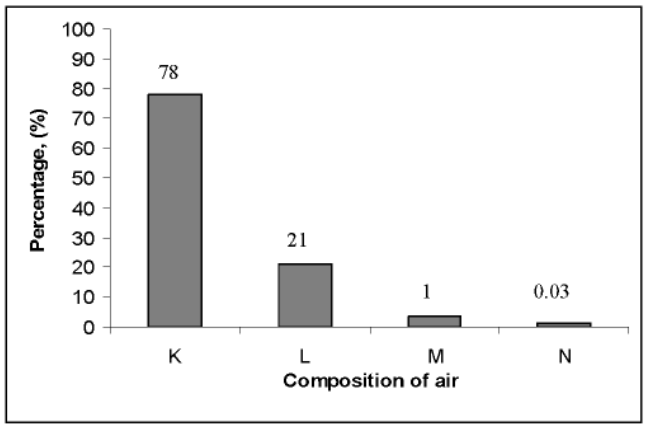


Diagram 5.1
Rajah 5.1

a) (i) Based on Diagram 5.1, complete Table 5.1.
Berdasarkan Rajah 5.1, lengkapkan Jadual 5.1.

Name of gas L *Nama gas L*	Properties of gas L *Sifat gas L*
.....	....

Table 5.1
Jadual 5.1

[2 marks]

(ii) Diagram 5.2 shows the set up of an experiment to study solubility of gases L and N in water.
Rajah 5.2 menunjukkan susunan eksperimen untuk mengkaji keterlarutan gas L dan N dalam air.

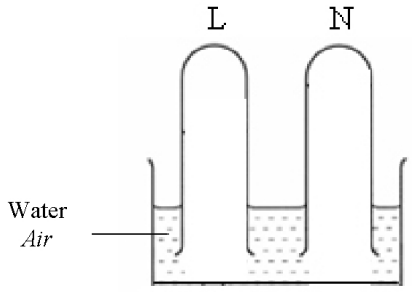


Diagram 5.2
Rajah 5.2

Draw the level of water for each test tube in Diagram 5.2 to show the observation of this experiment.
Lukis aras air bagi setiap tabung uji dalam Rajah 5.2 bagi menunjukkan pemerhatian eksperimen ini.

[1 mark]
[1 markah]

(iii) State the test for gas N?
Nyatakan ujian untuk gas N?

.....

[1 mark]
[1 markah]

b) Diagram 5.3 shows the burning of charcoal in the present of gas L
Rajah 5.3 menunjukkan pembakaran arang dengan kehadiran gas L

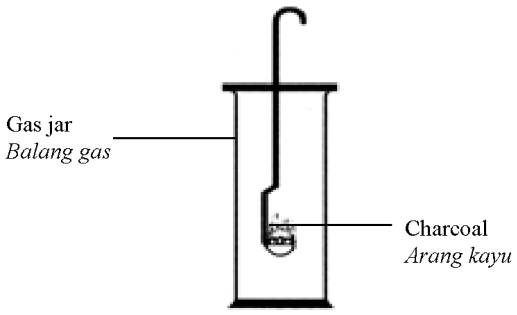


Diagram 5.3
Rajah 5.3

Write the word equation to represent the burning of charcoal.
Tulis persamaan perkataan bagi mewakili pembakaran arang.

[2 marks]

c) The diagram 5.4 shows an activity to study the component in the air.
Rajah 5.4 menunjukkan aktiviti bagi mengkaji komponen dalam udara.

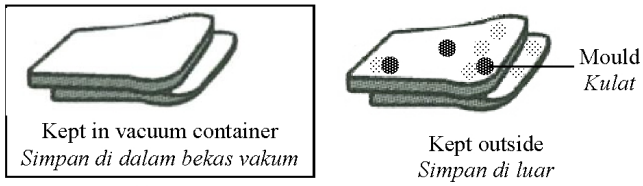


Diagram 5.4
Rajah 5.4

The bread in Diagram 5.4 (a) is kept in the vacuum container, while diagram 5.4 (b) is left outside for one week.
Roti dalam Rajah 5.4 (a) disimpan dalam bekas vakum, manakala Rajah 5.4 (b) ditinggalkan di luar selama satu minggu.

(i) State what happen to the bread in diagram 5.4 (a), after one week.
Nyatakan apa yang berlaku kepada roti dalam rajah 5.4(a) selepas satu minggu.

.....

.....

[1 mark]
[1 markah]

(ii) Give the reason?
Berikan alasan?

.....

.....

[1 mark]

SELANGOR 08 → Question 5

5 Diagram 5.1 shows an activity to study the property of an alkali. The red litmus paper does not change colour.
Rajah 5.1 menunjukkan aktiviti untuk mengkaji ciri alkali. Kertas litmus merah tidak tukar warna.

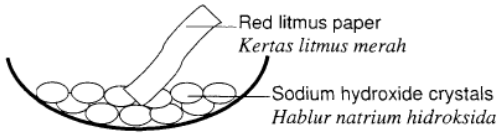


Diagram 5.1
Rajah 5.1

(a) (i) Suggest a way to change the colour of the red litmus paper.
Cadangkan satu cara untuk menukar warna kertas litmus merah.

.....

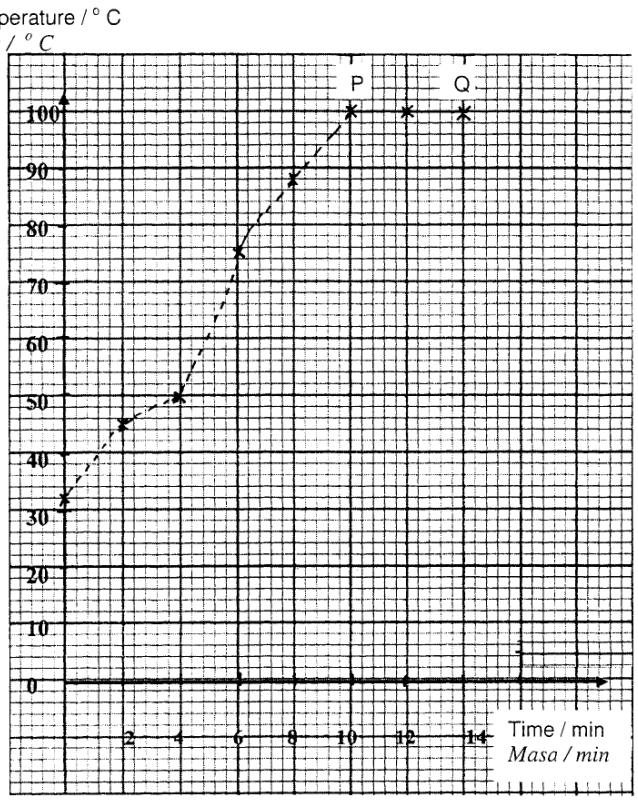
[1 *mark*]
[1 *markah*]

(ii) Give an example of an everyday substance which will change the colour of the red litmus paper.
Berikan satu contoh bahan kehidupan setiap hari yang boleh menukarkan warna kertas litmus merah.

.....

[1 *mark*]
[1 *markah*]

(b) Graph 5.2 shows the temperature readings of water in an experiment.
Graf 5.2 menunjukkan bacaan suhu air dalam suatu eksperimen.



Graph 5.2

(i) What is represented by the straight line PQ?
Apakah yang diwakili oleh garis PQ?

.....

[1 *mark*]

(ii) State the change in the state of matter at PQ.
Nyatakan perubahan keadaan jirim pada PQ.

.....

[1 *mark*]
[1 *markah*]

(iii) What happens to the boiling point if some sugar is added to the water?
Apakah yang berlaku kepada takat didih sekira sedikit gula dimasukkan ke dalam air?

.....

[1 *mark*]
[1 *markah*]

(iv) Plot a point **S** on the graph to show your answer in b (iii).
Plotkan satu titik S pada graf untuk menunjukkan jawapan di b (iii).

[1 *mark*]

N. SEMBILAN 08 → Question 4

4 Diagram 4.1 shows the apparatus set-up to investigate the elements in water by electrolysis.

Rajah 4.1 *menunjukkan susunan radas untuk menyiasat kandungan unsur-unsur di dalam air melalui elektrolisis.*

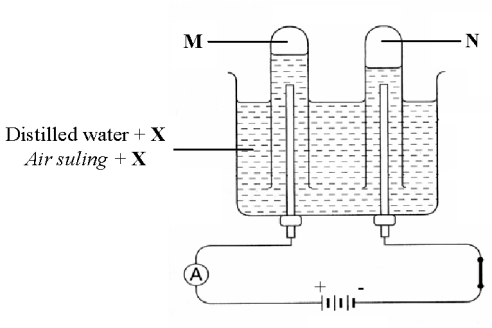


Diagram 4.1

(a) Based on Diagram 4.1, name gas **M** and **N**.

Berdasarkan Rajah 4.1, *namakan gas* **M** *dan* **N**.

M : .....

N : .....

[2 *marks*]
[2 *markah*]

(b) (i) Name substance **X**.

Namakan bahan **X**.

.....

[1 *mark*]
[1 *markah*]

(ii) What is the function of substance **X**?

Apakah fungsi bahan **X**?

.....

[1 *mark*]

(c) Complete the word equation for this reaction.

Lengkapkan persamaan perkataan untuk tindakbalas ini.

Water
Air → [ ] + [ ]

[2 *marks*]
[2 *markah*]

(d) Based on Diagram 4.1, complete Table 4.2 below.

Berdasarkan Rajah 4.1, *lengkapkan Jadual* 4.2 *di bawah.*

Gas ***Gas***	**Test with** ***Uji dengan***	**Observation** ***Pemerhatian***
M	Glowing splinter *Kayu uju berbara*	
N	Lighted splinter *Kayu uji menyala*	

Table 4.2
Jadual 4.2

[2 *marks*]

YIK 07 → Question 4

4. Diagram 4 shows an experiment carried out to determine the composition of water.

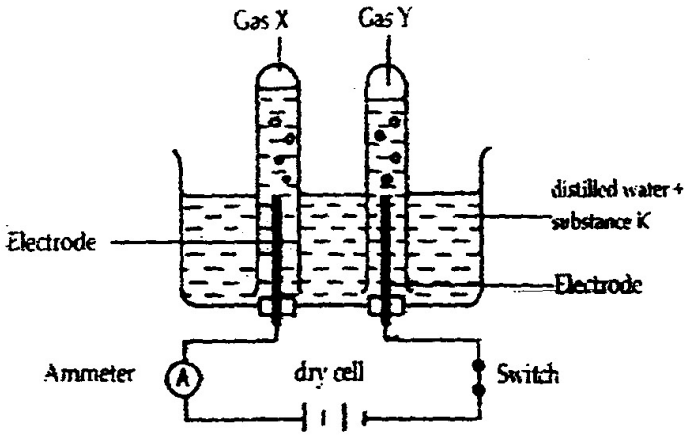


Diagram 4

(a) What is this process called?

.....[1 mark]

(b) The experiment cannot be started before the substance K are added to the distill water.
(i) Name the substance K that is added to distilled water.

.....[1 mark]

(ii) State the function of substance K.

.....[1 mark]

(c) A student carried out the test to identify gas Y. Complete the table below to show the observation of the test.

Procedure	Observation
Test with a burning wooden splinter	

[1 mark]

(d) State the ratio of gas Y to gas X in a molecule of water.

.....[1 mark]

(e) Based on the ratio stated in (d), draw and label a molecule of water in the spaces provided below.

[2 markah]

PERLIS 08 → Question 2

2 Diagram 2 shows a scientific method to determine the composition of water.
Rajah 2 menunjukkan kaedah saintifik untuk menentukan komposisi air.

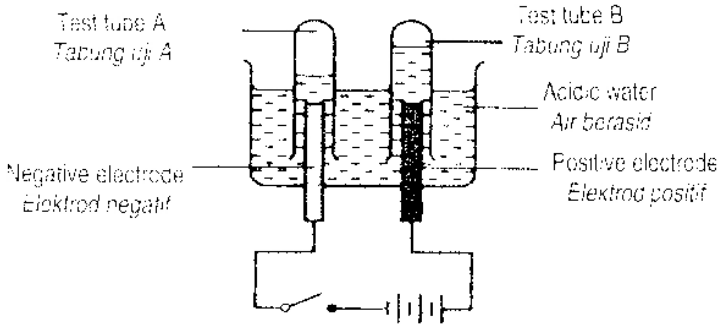


DIAGRAM 2
RAJAH 2

(a) What is the name of the process shown above ?
Apakah nama proses yang ditunjukkan di atas ?

..... [1 mark]
[1 markah]

(b) Give another name for :
Berikan nama lain untuk :

(i) Positive electrode :
Elektrod positif ....

(ii) Negative electrode :
Elektrod negatif : ....

[2 marks]
[2 markah]

(c) State the energy changes in this process.
Nyatakan perubahan tenaga yang berlaku semasa proses ini.

..... [1 mark]
[1 markah]

(d) Name the gas collected in test tube B.
Namakan gas yang terkumpul di dalam tabung uji B.

..... [1 mark]
[1 markah]

(e) What is the ratio of the volume of gas collected in test tube A with the volume of gas collected in test tube B?
Apakah nisbah isipadu gas yang terkumpul di dalam tabung uji A kepada isipadu gas di dalam tabung uji B?

..... [1 mark]

SELANGOR 06 → Question 4

4. Diagram 5 shows the apparatus used to study the composition of water through the process of electrolysis.

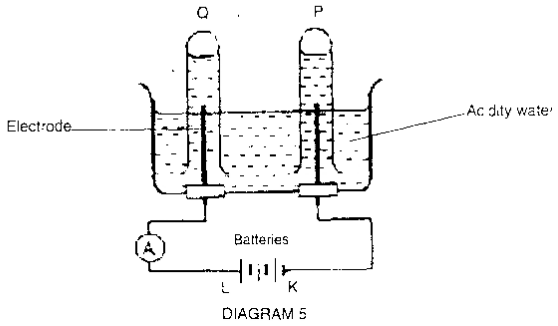


DIAGRAM 5

(a) (i) Name the gas collected at P.

_____ *[1 mark]*

(ii) State one test to confirm the presence of gas collected at P.

_____ *[1 mark]*

(b) What happen if the terminals K and L are reversed?

_____ *[1 mark]*

(c) If the volume of gas collected at P is 10 cm^3, what is the volume of gas collected at Q?

_____ cm^3 *[1 mark]*

Diagram 6 shows the process of water purification that occurs at a treatment plant.

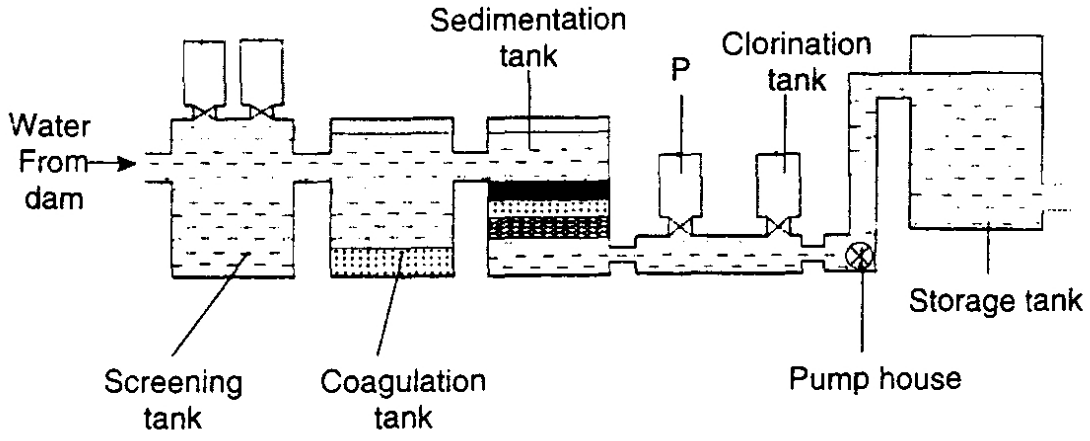


DIAGRAM 6

(d) (i) Why is alum usually added in the coagulation tank?

_____ *[1 mark]*

(ii) How does filtration at P help in the purification?

_____ *[1 mark]*

(e) Table 1 shows solution K and M with their respective pH values.

Solution	K	M
pH	14	2

TABLE 1

10 cm^3 of distilled water is added to solution K and M. What will happen to the pH values of the solution.

K _____

M _____ *[2 marks]*

N. SEMBILAN 06 → Question 4

Figure 4.1 shows a set-up of an experiment to investigate the neutralisation between diluted hydrochloric acid and sodium hydroxide solution. The result of the experiment is shown in Table 4.2.

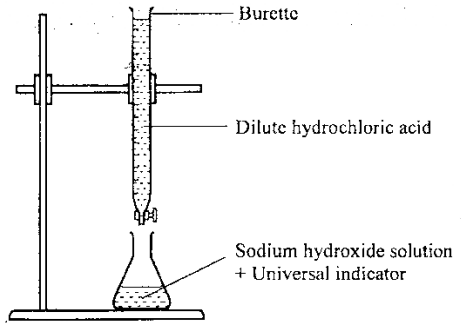


FIGURE 4.1

	Initial	Final
Change in colour	Purple	Green

TABLE 4.2

(a) (i) Why must we add the universal indicator into the conical flask?

.....

[1

(ii) State **one** the reason for your answer in (a) (i).

.....

.....

[1 m

(b) Write a word equation to show the reaction between the hydrochloric acid and sodium hydroxide.

[2 ma

(c) Figure 4.3 shows several liquid substances.

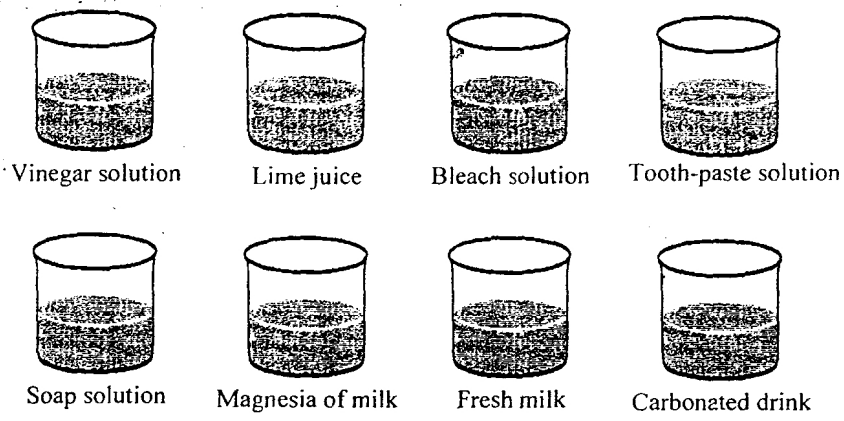


FIGURE 4.3

Based on the Figure 4.3, complete Table 4.4 by classifying the substances according to their properties.

Acid	Alkali
Lime juice	Soap solution

TABLE 4.4

[3 marks]

SBP 07 → Question 5

5 Diagram 5 shows the titration process.

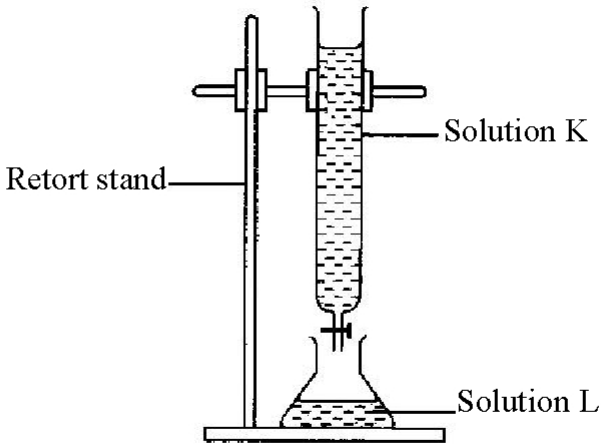


DIAGRAM 5

(a) What is neutralisation?

.....

[1 *mark*]

(b) Write down the general word equation for the neutralisation reaction.

.....

[1 *mark*]

(c) Give **one** example of solution K and L.

Solution K : .....

Solution L : .....

[2 *marks*]

(d) (i) What is the colour of the universal indicator at the end-point of the reaction?

.....

[1 *mark*]

(ii) What is the type of solution formed if the volume of solution K is more than solution L in the conical flask?

.....

[1 *mark*]

(e) State **two** uses of neutralisation in our daily life.

(i) .....

(ii) .....

[2 *marks*]

PAHANG 07 → Question 4

Diagram 4.1 shows a reaction between dilute hydrochloric acid and sodium hydroxide solution.

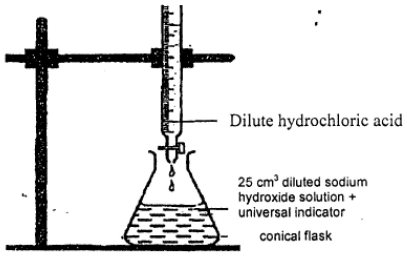


Diagram 4.1

The result of the experiment is recorded in the table below:

Change in colour of universal indicator	Initial	Final
	Purple	X
pH value	9	7

Table 4.2

(a) i) State the colour of X?

_____ [1 mark]

ii) Name the process that causes this change in colour.

_____ [1 mark]

(a) (iii) Complete the word equation that shows the reaction.

Hydrochloric acid + Sodium hydroxide → _____ + _____

[2 marks]

b) Diagram 4.3 shows several substances with different pH values.

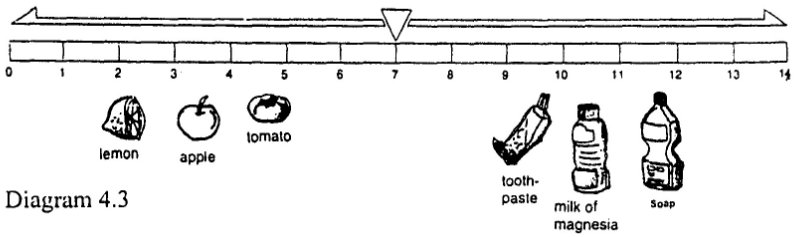


Diagram 4.3

i) Based on the pH value of substances in Figure 4, complete the table below. For each group give one example only.

Name of substances	Acidic	Alkaline

[2 marks]

(b) (ii) Estimate the new pH value if lemon juice is mixed with soap water. Circle the correct pH value.

pH 2	pH 7	pH 12

[1 mark]

(b) (iii) Why is toothpaste used to prevent tooth decay?

_____

_____

[1mark]

SELANGOR 07 → Question 3

5. Figure 5 shows a reaction between solution X and dilute sodium hydroxide solution.

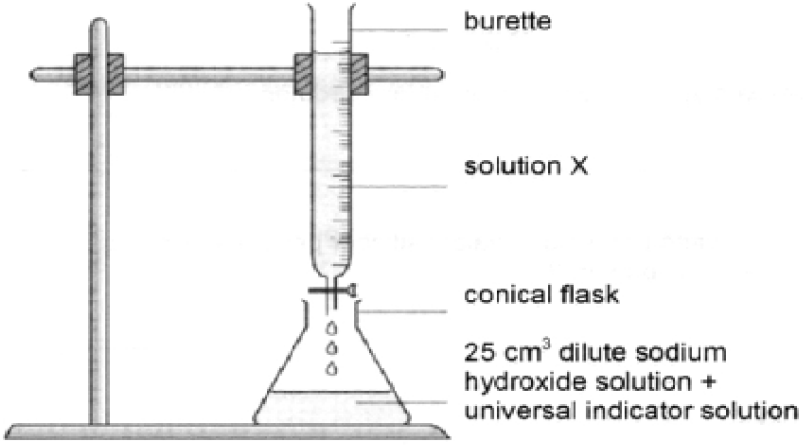


FIGURE 5

The result of the experiment is recorded in Table 3.

Volume of solution X / cm^3	5	10	15	20	25	30	35	40
pH	14	12	10	8	7	6	5	4

TABLE 3

(a) State two characteristics of solution X.

i. _____

ii. _____

[2 marks]

(b) State the volume of solution X needed to neutralise 25 cm^3 of dilute sodium hydroxide.

_____

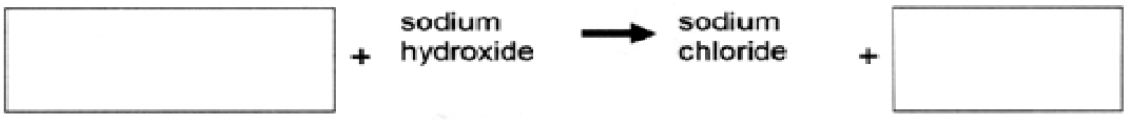
[1 mark]

(c) What is the colour of the universal indicator when 15 cm^3 of solution X is added into the dilute sodium hydroxide solution in the conical flask?

_____

[1 mark]

(d) Complete the equation below.



[2 marks]

MRSM 06 → Question 2

2 Figure 2 shows the main stages of water treatment process.

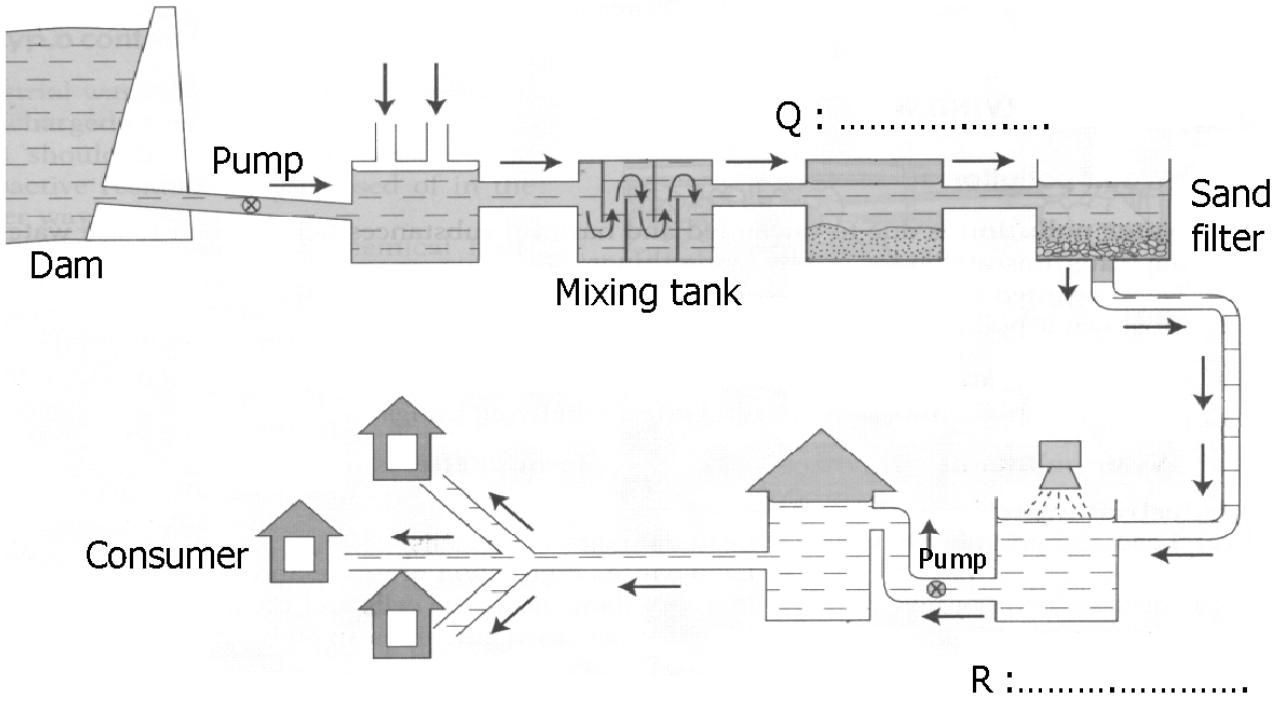


Figure 2

(a) Complete the stages in Figure 2 by using **two** of the following words:

Sedimentation tank	Chlorination tank	Coagulation tank

[2 marks]

(b) Slaked lime and alum are added into tank P. State the functions of these substances.

i) Slaked lime: .....

ii) Alum : .....

[2 marks]

(c) State **two** steps that can be taken to reduce water pollution.

i) .....

ii) .....

[2 marks]

PERAK 06 → Question 4

4. Figure 4 shows an apparatus to show that temperature affects air pressure.

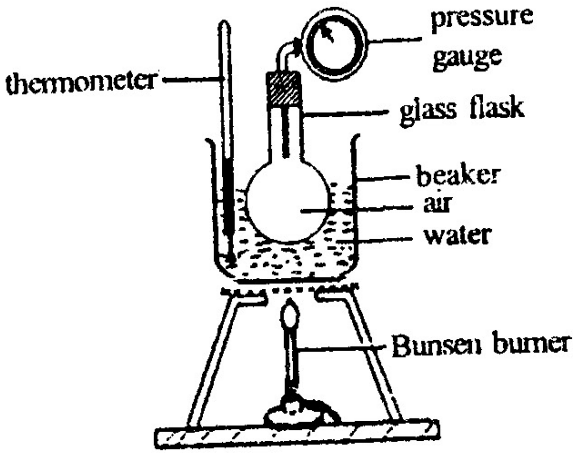


Figure 4

(a) What is the function of the pressure gauge?

.....

(1 mark)

(b) What happens to the air pressure in the glass flask when the water is heated?

.....

(1 mark)

(c) Based on your observation, what is the relationship between temperature and air pressure?

.....

(1 mark)

(d) Choose **two** devices from the box below which use the principle of air pressure to operate.

electric kettle	syphon	rice cooker	rubber sucker

(i) .....

(ii) .....

(2 marks)

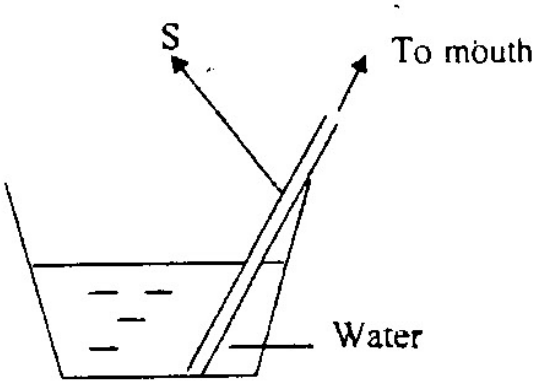
(e) Besides temperature, state **one** other factor that affects air pressure.

.....

(1 mark)

KELANTAN 06 → Question 3

3. The diagram shows devices using the principal of air pressure.



a) What is the function of the device labelled:

S - _____ (1 mark)

b) (i)What happens when air is sucked out of the drinking straw?

_____ (1 mark)

(ii) Give one reason for your answer in b (i)

_____ (1 mark)

c) What happens when there is a hole on the drinking straw?

_____ (1 mark)

c) Name two other devices that use the principal of air pressure:

i) _____ (1 mark)

ii) _____ (1 mark)

SELANGOR 08 → Question 4

4 Diagram 4.1 shows a set-up of apparatus to investigate air pressure.
Rajah 4.1 menunjukkan satu set radas untuk mengkaji tekanan udara.

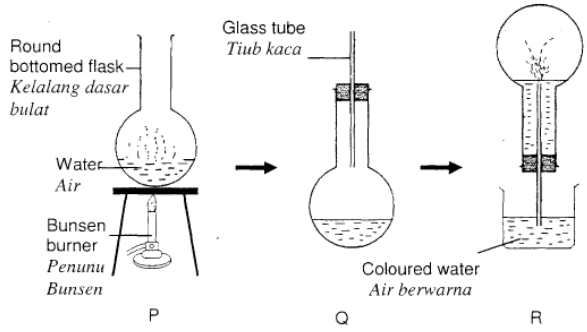


Diagram 4.1
Rajah 4.1

(a) (i) State a reason for boiling the water in P.
Nyatakan satu sebab mengapa air perlu dipanaskan dalam P.

.....
.[1 *mark*]
[1 *markah*]

(ii) State one observation in R.
Nyatakan satu pemerhatian dalam R.

.....
[1 *mark*]
[1 *markah*]

(iii) Explain your answer in a (ii).
Terangkan jawapan anda di a (ii).

.....
[1 *mark*]
[1 *markah*]

(iv) What is the conclusion for this activity ?
Apakah kesimpulan aktiviti ini ?

.....
[1 *mark*]
[1 *markah*]

(b) Diagram 4.2 shows a person drinking from a packet of juice.The packet collapses.
Rajah 4.2 menunjukkan seorang sedang minum dari satu kotak minuman jus. Kotak minuman menjadi kemek.

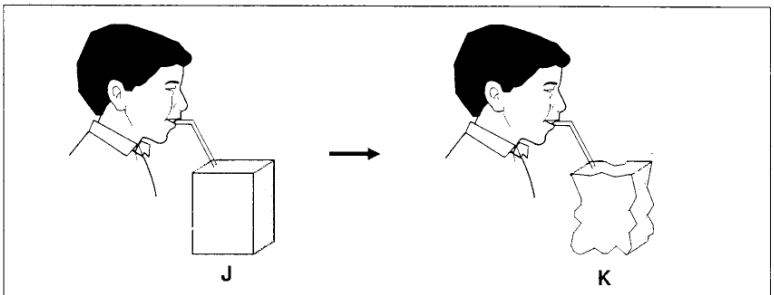
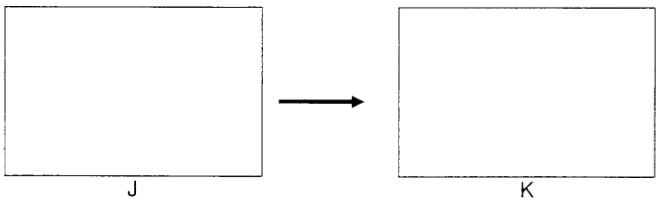


Diagram 4.2
Rajah 4.2

(i) What step can you take to change K to its original shape ?
Apakah langkah yang anda boleh lakukan untuk mengembalikan K ke bentuk asalnya?

.....
[1 *mark*]
[1 *markah*]

(ii) Draw particles in the boxes given to show the changes that has occurred in J and K.
Lukiskan zarah-zarah di dalam kotak untuk menunjukkan perubahan yang berlaku di J dan K.



[1 *mark*]
[1 *markah*]

TERENGGANU 07→Question 4

Diagram 4.1 shows a man is pushing a box into a lorry.
Rajah 4.1 menunjukkan seorang lelaki sedang menolak sebuah kotak ke dalam sebuah lori.

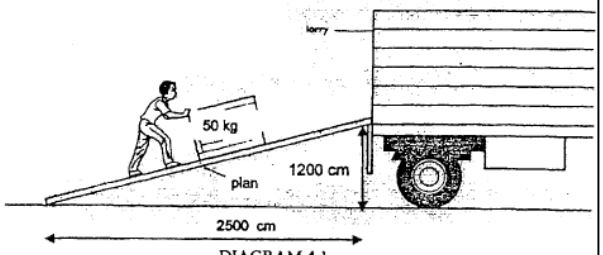


DIAGRAM 4.1
RAJAH 4.1

a) Explain why the man is said to do a work?
Terangkan mengapa lelaki tersebut dikatakan melakukan kerja?

.....

.....

[1 mark]

b) Based on Diagram 4.1, using Work done = Force x Distance, how much work is done by the man.
Berdasarkan Rajah 4.1, menggunakan Kerja = Daya x Jarak, berapakah kerja yang telah dilakukan oleh lelaki tersebut.

[2 marks]

c) What happen to the work done, if the man in Figure 4.1 use a trolley to push the box. Explain your answer.
Apakah yang berlaku terhadap kerja jika lelaki dalam Rajah 4.1 menggunakan troli untuk menolak kotak.Jelaskan jawapan anda.

.....

.....

[2 marks]

d) Diagram 4.2 shows how to push a box using two different situations.
Rajah 4.2 menunjukkan bagaimana menolak kotak menggunakan dua keadaan yang berbeza.

Situation Q
Situasi Q

Situation R
Situasi R

DIAGRAM 4.2
RAJAH 4.2

i) Based on Diagram 4.2, which situation is harder to push the box?
Berdasarkan Rajah 4.2, keadaan manakah lebih sukar untuk menolak kotak ?

.....

[1 mark]

ii) Give a reason.
Nyatakan sebabnya.

.....

[1 mark]

MELAKA 08→ Question 4

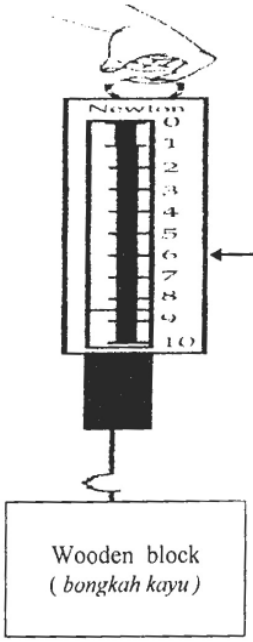


Diagram 4.1

Diagram 4.1 above shows a student carried out an activity to determine the work done.
(*Rajah 4.1 di atas menunjukkan pelajar menjalankan aktiviti untuk mendapatkan kerja yang lengkap.*)

a) Name the measuring tool above.
(Namakan alat pengukuran di atas)

_____ [1mark]

b) State the function of the apparatus in (a)
(Nyatakan fungsi radas dalam (a)

_____ [1mark]

c) Record the reading of the measuring tool in Diagram 4.1
(Rekodkan bacaan pada alat pengukuran dalam rajah 4.1)

_____ [1mark]

Diagram 4.2
(*Rajah 4.2*)

A man lifting a 70N suitcase
(*Seorang lelaki mengangkat beg 70N*)

A man lifted a 70N suitcase onto his shoulder a vertical distance of a 3.5m.
How much work did he do ?
(*Seorang lelaki mengangkat beg 70N melalui jarak mendatar sejauh 3.5m. Berapakah kerja yng telah dia lakukan ?*)

[3marks]

JOHOR 08→ Question 5

5. a) Based on the situation in Diagram 5 (a) and 5(b), state the forces involved.
Berdasarkan situasi dalam Rajah 5 (a) dan 5(b), nyatakan daya yang terlibat.

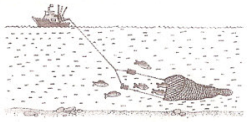


Diagram 5 (a)

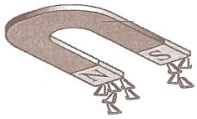


Diagram 5 (b)

[2 marks]

b) What is the unit used to measure force?
Apakah unit yang digunakan untuk mengukur daya?

_____

[1 mark]

c)

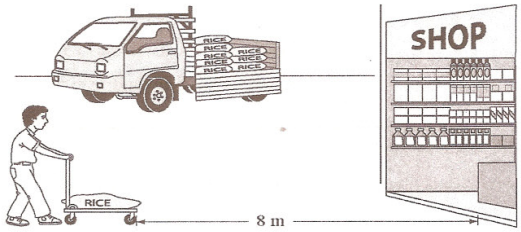


Diagram 5 (c)
Rajah 5 (c)

Diagram 5 (c) shows a worker pushes a sack of rice from a lorry to the shop. If the frictional force between the trolley and the ground is 500 N, calculate the work done by the worker in the figure above.
Rajah 7 menunjukkan seorang pekerja menolak guni beras dari lori ke kedai. Jika daya geseran di antara troli dan tanah ialah 500N. Kira kerja yang dilakukan oleh pekerja dalam rajah di atas.

Work done = Force X Distance

[2 marks]

d) If the worker takes 30 seconds to reach the shop, calculate the power used by the worker.
Jika pekerja itu mengambil masa 30 saat untuk sampai ke kedai, kirakan kuasa yang digunakan oleh pekerja itu.

$$\text{Power} = \frac{\text{Work done}}{\text{Time taken}}$$

[2 marks]

PERAK 07→ Question 5

5 Diagram 5 shows a boy of mass 55 kg climbing up a flight of stairs.

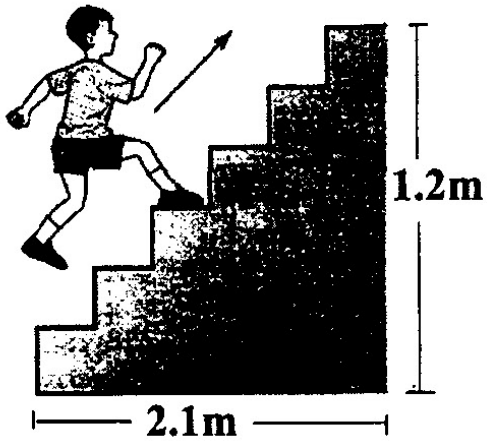


DIAGRAM 5

(a) (i) Name the force that acts against the boy as he climbs up the stairs.

.....

(1 mark)

(ii) Find the value of the force in (i) **(1 kg = 10 Newton).**

.....

(1 mark)

(iii) Calculate the work done by the boy.

.....

(1 mark)

(iv) If the time taken for the boy to reach the top of the stairs is 6 seconds, calculate the power of the boy.

(2 marks)

(b) If the same boy walks the same distance on a level ground, what conclusion can you make about the work done compared to a(iii)?

.....

(1 mark)

(c) State the force that enables the boy to climb up the stairs without slipping.

.....

(1 mark)

JOHOR 06→ Question 4

Figure 4.1 shows an experiment to study the effect of the frictional force. The results o the experiment is shown in Table 4.2

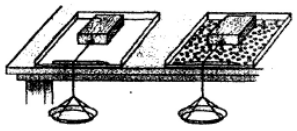


FIGURE 4.1

Things that are put under the wooden block	Total weights/frictional force (N)
Without anything (control)	0.6
Ball bearings	0.1

TABLE 4.2

The above observations show that frictional force can be reduced by the ball bearing.

a) i) State another way to reduce friction.

.....

[1 mark]

ii) Give one disadvantage of frictional force.

.....

[1 mark]

b) State the force acted on each situation in Figure 4.3

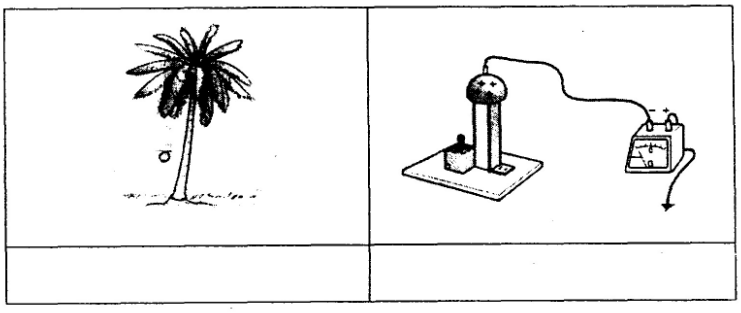


FIGURE 4.3

[2 marks]

c) Figure 4.4 shows a 50kg passenger pushing the 30kg load at a distance of 50m. He reached the check in door in 2 minutes,

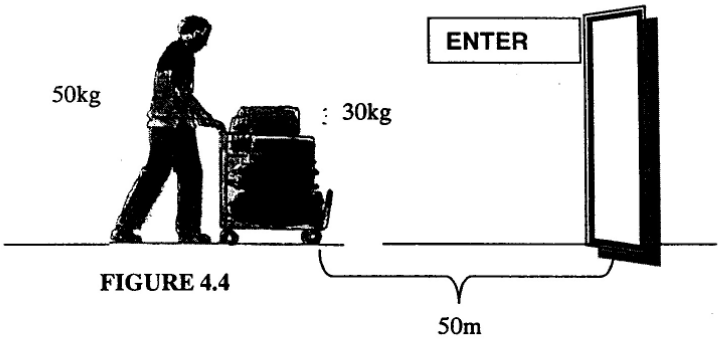


FIGURE 4.4

i) Show with an arrow the direction of frictional force on Figure 4.4.

[1 mark]

ii) Calculate the work done by the man.
(Work = Force X Distance)

..... Joules

[2 marks]

iii) Calculate the power generated by the man.

$$\text{Power} = \frac{\text{work}}{\text{Time}}$$

.....Watt

[2 marks]

SBP 08→ Question 4

4 Diagram 4 shows the skeletal system of a blue whale.

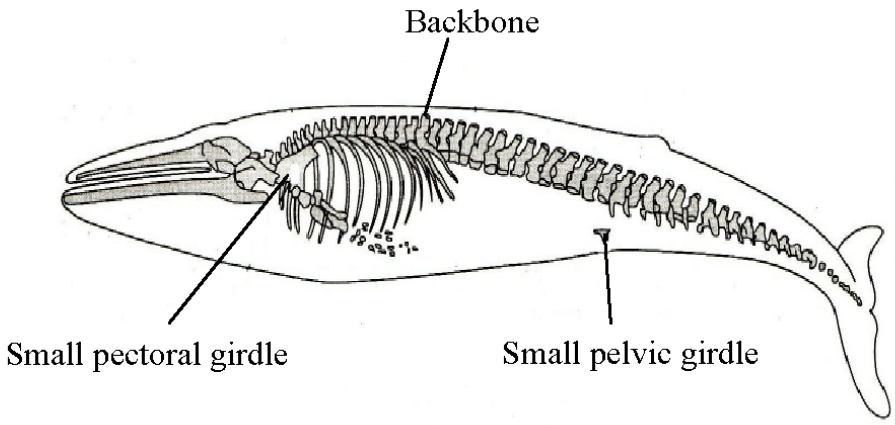


DIAGRAM 4

(*a*) Name the type of support system for the blue whale.

.....

[1 *mark*]

(*b*) State other **two** types of support systems for animals.

i. .....

ii. .....

[2 *marks*]

(*c*) How can a whale support their big body size in the sea?

.....

[1 *mark*]

(*d*) Each year, many whales get beached or stranded in shallow water. When a whale is beached, it is unable to support itself. Explain why?

.....

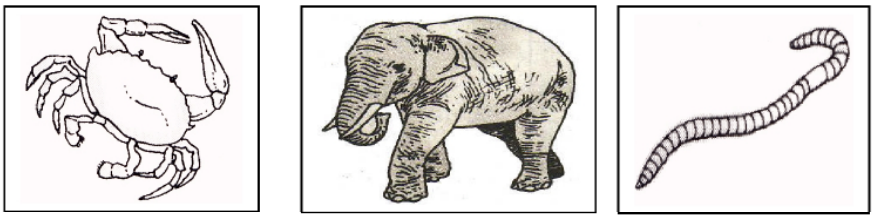
.....

.....

[2 *marks*]

MRSM 08→ Question 2

2. Diagram 2.1 shows animals J, K and L with different types of support system.
Rajah 2.1 menunjukkan haiwan J, K dan L yang mempunyai jenis sistem sokongan yang berlainan.



J K L

Diagram 2.1
Rajah 2.1

a) (i) In the space provided on Diagram 2.1, name type of skeleton **for any two** of animals.
*Dalam ruang yang disediakan pada Rajah 2.1, namakan jenis rangka bagi **mana-mana dua** haiwan.*

[2 marks]
[2 markah]

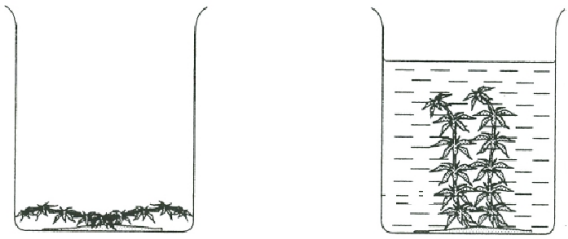
(ii) Give one other example of an animal that has the same support system as :
Berikan satu contoh lain haiwan yang mempunyai sistem sokongan yang sama seperti :

K : ……

L : ……

[2 marks]

b) Diagram 2.2 shows *Hydrilla* plant in two different situation
Rajah 2.2 menunjukkan Hydrilla dalam dua situasi yang berbeza.



(a) (b)

Diagram 2.2
Rajah 2.2

Based Diagram 2.2, give the reason for the condition of *Hydrilla* in situation (b).
Berdasarkan Rajah, berikan sebab bagi keadaan Hydrilla seperti dalam situasi (b).

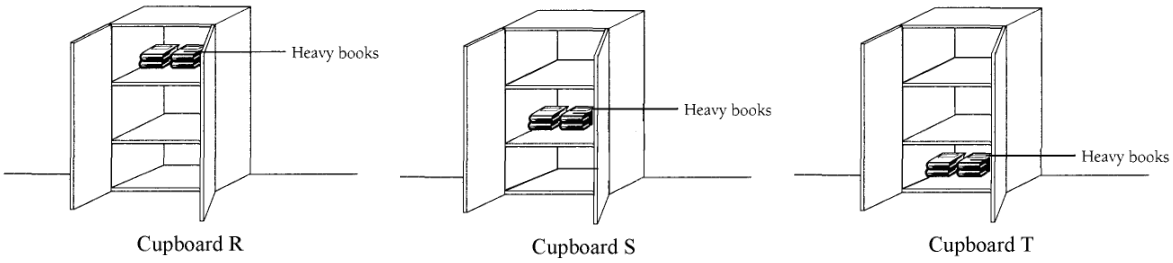
……

……

[2 marks]

SBP 07→ Question 6

6 Diagram 6.1 shows three cupboards R, S and T with some heavy books stored in it.



(a) On Diagram 6.1, mark "X" at where the centre of gravity of the three cupboards will be.

[3 *marks*]

(b) (i) Which cupboard is more stable?

.....

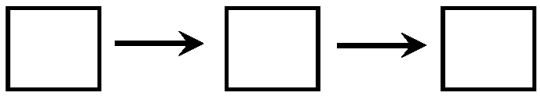
[1 *mark*]

(ii) Give **one** reason for your answer in (b) (i).

.....

[1 *mark*]

(iii) Using the letter in Diagram 6.1, complete the diagram below to show the stability of the cupboards in descending order.



[1 *mark*]

(c) Diagram 6.2 shows a giraffe drinking water from a pond.

DIAGRAM 6.2

Based on Diagram 6.2,

(i) How the giraffe maximise its stability?

.....

[1 *mark*]

(ii) Explain your answer in (c) (i).

.....

.....

[2 *marks*]

TERENGGANU 06→Question 4

Figure 4.1 shows two different models, P and Q which are made from corks and pins. The two models are placed on a wooden board and then tilted as shown in figure.

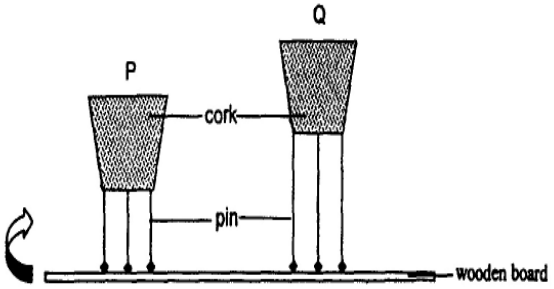


FIGURE 4.1

a) i) Which model more stable?

.....

(1 mark)

ii) Why?

.....

(1 mark)

b) Draw a diagram to show a way to increase the stability of model Q by referring Figure 4.1.

(2 marks)

c) Figure 4.2 shows a way of art of self - defence

FIGURE 4.2

i) Based on Figure 4.2 clarify the way to stabilize his body.

.....

ii) Give the reason.

.....

(2 marks

PERAK 08→ Question 4

Diagram 4.1 shows a bottle opener.
Rajah 4.1 menunjukkan pembuka botol.

Diagram 4.1
Rajah 4.1

(a) (i) Based on Diagram 4.1, state the class of lever of the bottle opener.
Berdasarkan Rajah 4.1, nyatakan kelas tuas bagi pembuka botol itu.

.....

[1 mark]
[1 markah]

(ii) Give **one** reason for your answer in (a) i.
*Berikan **satu** sebab bagi jawapan anda di (a) i.*

.....

[1 mark]
[1 markah]

(b) Diagram 4.2 shows a nail being pulled out using tools **P** and **Q**.
*Rajah 4.2 menunjukkan sebatang paku dicabut dengan menggunakan alat **P** dan alat **Q**.*

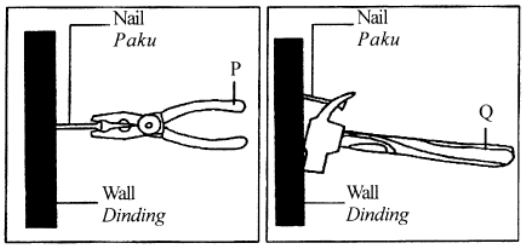


Diagram 4.2
Rajah 4.2

Based on Diagram 4.2 state the difference about amount of energy used to pull out the nail by tools **P** and **Q**.
*Berdasarkan Rajah 4.2, nyatakan perbezaan mengenai jumlah tenaga yang digunakan untuk mencabut paku dengan alat **P** dan alat **Q**.*

.....

.....

[1 mark]

(c) Diagram 4.3 shows a fish seller carrying two baskets **J** and **K**.
*Rajah 4.3 menunjukkan seorang penjual ikan membawa dua bakul **J** dan **K**.*

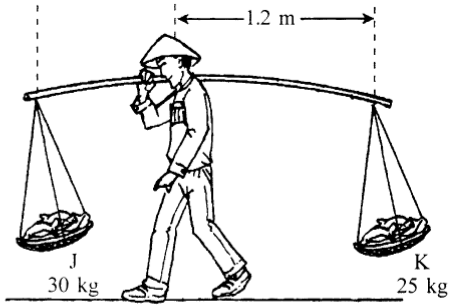


Diagram 4.3
Rajah 4.3

Calculate the distance between the seller and basket **J** so that the baskets are balanced
*Hitungkan jarak di antara penjual dan bakul **J** untuk menyeimbangkan bakul itu.*

[2 marks]
[2 markah]

(d) Diagram 4.4 shows a boy trying to move the stone using a piece of wood.
Rajah 4.4 menunjukkan seorang budak lelaki cuba menggerakkan batu menggunakan sebatang kayu.

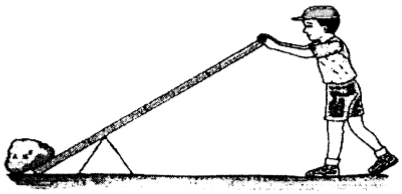


Diagram 4.4
Rajah 4.4

Label the position of fulcrum, effort and load on Diagram 4.4
Labelkan kedudukan fulkrum, daya dan beban pada Rajah 4.4

[1 marks]

JOHOR 07→ Question 3

Figure 3.1 shows a claw hammer.
Rajah 3.1 menunjukkan tukul kuku kambing.

Figure 3.1
Rajah 3.1

a) i) Based on figure 3.1, state the class of lever of the claw hammer.
Berdasarkan rajah 3.1, nyatakan kelas tuas bagi tukul tersebut.

.....

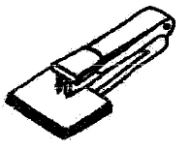
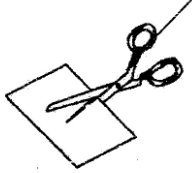
[1 *mark*]

ii) What is the advantage of the lever that you mention in a(i)
Apakah kebaikan tuas yang anda nyatakan di a(i)

.....

[1 mark]

b) Draw lines to show the correct match between simple machine and the class levers.
Lukiskan garisan untuk menunjukkan padanan yang betul antara mesin ringkas dan kelas tuas.
Draw line as shown below.
Lukiskan garisan seperti ditunjukkan di bawah

Simple machine *Mesin ringkas*	Class lever *kelas tuas*
	First class *Kelas pertama*
	Second class *Kelas kedua*
	Third class *Kelas ketiga*

[2 marks]

c) Figure 3.2 shows a see-saw. Linda's weight is 600 N and Daniel's weight is 400 N.
Rajah 3.2 menunjukkan sebuah jongkang-jongket. Berat Linda ialah 600 N dan berat Daniel ialah 400 N.

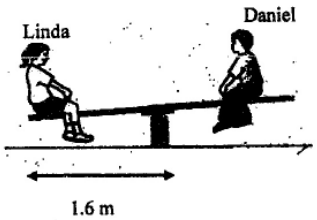


Figure 3.2
Rajah 3.2

Calculate the distance of Daniel from the fulcrum so that the see-saw is balanced using the formula below.
Kira jarak antara Daniel dengan fulkrum supaya jongkang-jongket itu seimbang dengan menggunakan rumus di bawah.

Load x distance from fulcrum = effort x distance from fulcrum *Beban x jarak dari fulcrum = daya x jarak dari fulcrum*

Distance of Daniel from the fulcrum = _____ m
Jarak Daniel dari fulkrum

[2 marks

- End of question paper -