

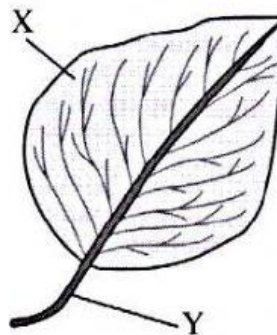
Leaf Structure and Function

Struktur dan Fungsi Daun

PAPER 1

- 1 The diagram below shows the external structure of a green leaf.

Rajah di bawah menunjukkan satu struktur luar daun hijau.



Which of the following is true about X and Y?
Antara yang berikut, yang manakah benar mengenai X dan Y?

	X	Y
A	Margin <i>Tepi daun</i>	Stipules <i>Stipula</i>
B	Lamina <i>Lamina</i>	Petiole <i>Petiol</i>
C	Midrib <i>Tulang daun</i>	Vein <i>Urat daun</i>
D	Petiole <i>Petiol</i>	Lamina <i>Lamina</i>

2 What is the function of palisade mesophyll cell?

Apakah fungsi sel mesofil palisad?

- A Reduces water loss by evaporation
Mengurangkan kehilangan air melalui penyejatan
- B Protects the leaf from damage
Melindungi daun daripada rosak
- C Provides mechanical support for the plant
Memberi sokongan mekanikal kepada tumbuhan
- D Absorbs sunlight to carry out photosynthesis
Menyerap cahaya matahari untuk menjalankan fotosintesis

3 The statements below are the characteristics of one of the internal structures of leaf lamina.

Pernyataan di bawah adalah ciri-ciri satu struktur dalaman lamina daun.

- Waxy layer
Lapisan berlilin
- Waterproof
Kalis air
- Prevents excessive water loss
Menghalang kehilangan air berlebihan

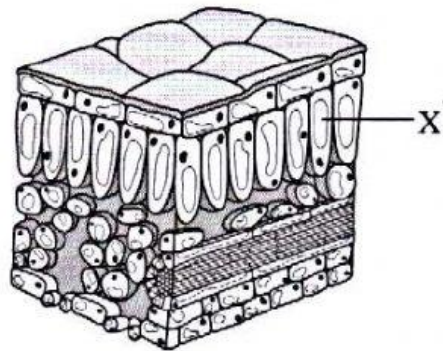
What is the structure?

Apakah struktur tersebut?

- | | |
|---|---|
| A Cuticle
<i>Kutikel</i> | B Upper epidermis
<i>Epidermis atas</i> |
| C Vascular bundle
<i>Berkas vaskular</i> | D Lower epidermis
<i>Epidermis bawah</i> |

- 4 The diagram below shows the cross section of a leaf.

Rajah di bawah menunjukkan satu keratan rentas daun.



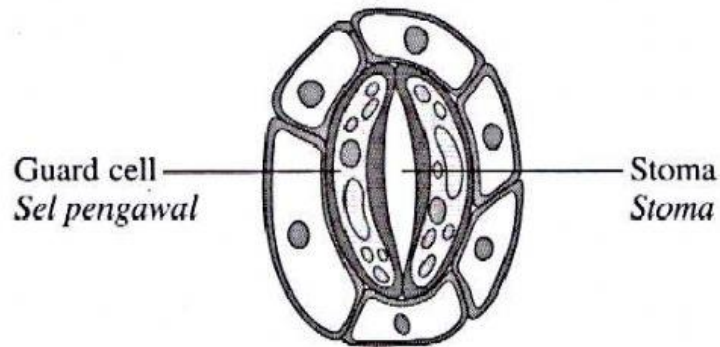
What is X?

Apakah X?

- A Cuticle
Kutikel
- B Upper epidermis
Epidermis atas
- C Palisade mesophyll cell
Sel mesofil palisad
- D Spongy mesophyll cell
Sel mesofil berspan

5 The diagram below shows the structure of a stoma.

Rajah di bawah menunjukkan struktur stoma.



What are the factors that lead to the opening and closing of the stoma?

Apakah faktor yang menyebabkan pembukaan dan penutupan stoma?

- I The uptake of potassium ions by guard cells
Pengambilan ion kalium oleh sel pengawal
 - II Sucrose concentration in guard cells
Kepekatan sukrosa di dalam sel pengawal
 - III High chloroplast density in guard cells
Kepadatan tinggi kloroplas di dalam sel pengawal
 - IV The mineral concentration in guard cells
Kepekatan mineral di dalam sel pengawal
- A** I and II **B** II and III
I dan II II dan III
- C** III and IV **D** I and IV
III dan IV I dan IV

6 Which of the following statements are true regarding the adaptation of the internal structure of a leaf to photosynthesis?

Antara pernyataan berikut, yang manakah benar berkaitan penyesuaian struktur dalaman daun dengan fotosintesis?

I There are stomata on the upper epidermis of the leaf.

Terdapat stoma di epidermis atas daun.

II There are large air spaces between spongy mesophyll cells.

Terdapat ruang udara yang besar di antara sel-sel mesofil berspin.

III Palisade mesophyll cell contains many chloroplasts.

Sel mesofil palisad mengandungi banyak kloroplas.

IV Many minerals in the stomata

Banyak mineral di dalam stoma

A I and II

I dan II

B II and III

II dan III

C III and IV

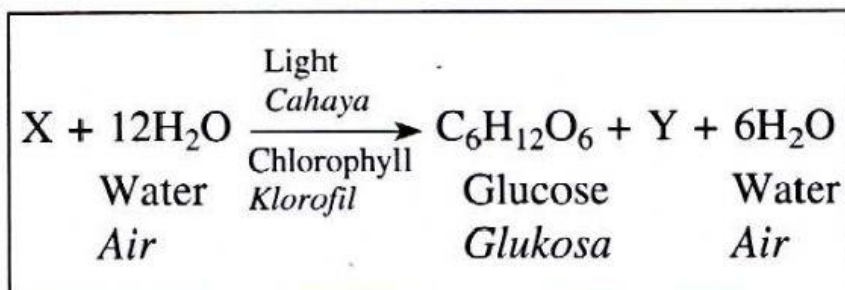
III dan IV

D I and IV

I dan IV

- 7 The following information shows a chemical equation that represents the process of photosynthesis.

Maklumat berikut menunjukkan satu persamaan kimia yang mewakili proses fotosintesis.



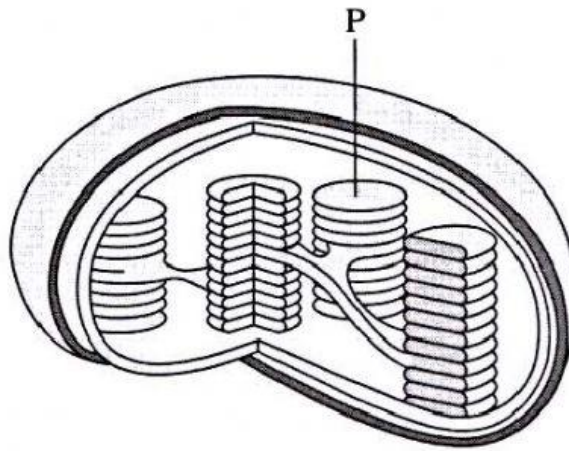
What are X and Y?

Apakah X dan Y?

	X	Y
A	Carbon dioxide <i>Karbon dioksida</i>	Oxygen <i>Oksigen</i>
B	Nitrogen <i>Nitrogen</i>	Potassium <i>Kalium</i>
C	Oxygen <i>Oksigen</i>	Carbon dioxide <i>Karbon dioksida</i>
D	Carbohydrate <i>Karbohidrat</i>	Protein <i>Protein</i>

8 The diagram below shows the structure of a chloroplast.

Rajah di bawah menunjukkan struktur satu kloroplas.



What is the function of P?

Apakah fungsi P?

- A** Absorbs light energy
Menyerap tenaga cahaya
- B** Transports water
Mengangkut air
- C** Allows gaseous exchange
Membenarkan pertukaran gas
- D** Absorbs mineral ions
Menyerap ion mineral