

Bahagian A [60 markah]

Jawab semua soalan dalam ruangan yang disediakan.

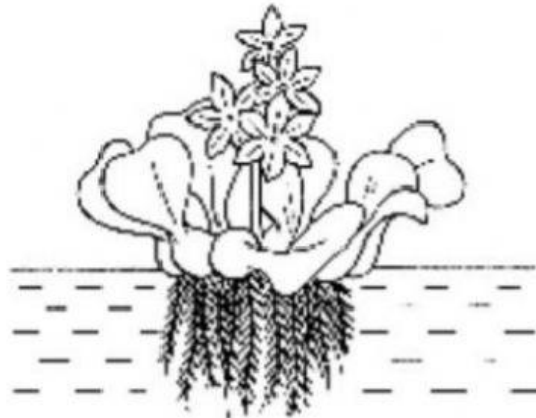
Section A [60 marks]

Answer all questions in the spaces provided.

1. Rajah menunjukkan tumbuhan keladi bunting.

Tumbuhan ini mempunyai daun yang kalis air untuk membantu ia terapung.

Diagram shows water hyacinth plant. This plant has water proof leaves to help it floating.



a) Namakan lapisan daun yang menjadikan daun kalis air.

Name the layer of leaves which make the leaves water proof.

[1m]

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b) Apakah kepentingan lapisan daun yang anda namakan di atas?

What is the importance of the layer of leaves you have named above? [1m]

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c) Menggunakan kefahaman anda tentang osmosis, ramalkan keadaan sel tumbuhan tersebut berdasarkan lokasinya.

Based on your understanding about osmosis, predict the condition of the plant cells based on its location.

[1m]

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d) Berikan alasan untuk menyokong jawapan anda tentang keadaan sel tumbuhan tersebut.

Give a reason to support your answer about the condition of the plant cells. [1m]

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e) Terangkan bagaimana kehadiran tumbuhan keladi bunting di permukaan tasik memberikan manfaat kepada air tasik itu.

Explain how the presence of water hyacinth plant on lake surface gives benefit to the lake water. [2m]

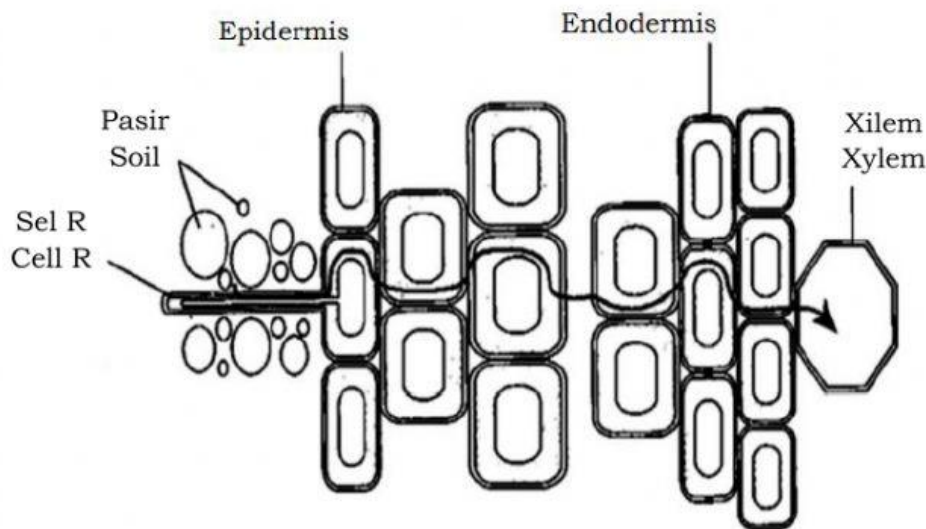
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2. Rajah menunjukkan laluan pergerakan air memasuki xilem.

Diagram shows the movement of water entering xylem.



a) Sel R adalah sel dalam tumbuhan yang tidak dapat menjalankan fotosintesis. Wajarkan mengapa keadaan ini berlaku berdasarkan ciri sel R.

Cell R is a cell in plant which is unable to carry out photosynthesis. Justify why this condition could occurred based on characteristic of cell R. [1m]

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b) Bagaimanakah sel R membantu air memasuki xilem?

How cell R helps water to enter the xylem?

[2m]

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c) Namakan jenis laluan air berdasarkan rajah.

Name the type movement of water based on diagram.

[1m]

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d) Apakah peranan penting yang dimainkan oleh endodermis dalam proses pergerakan air memasuki xilem?

What is the role plays by the endodermis in process movement of water entering the xylem?

[1m]

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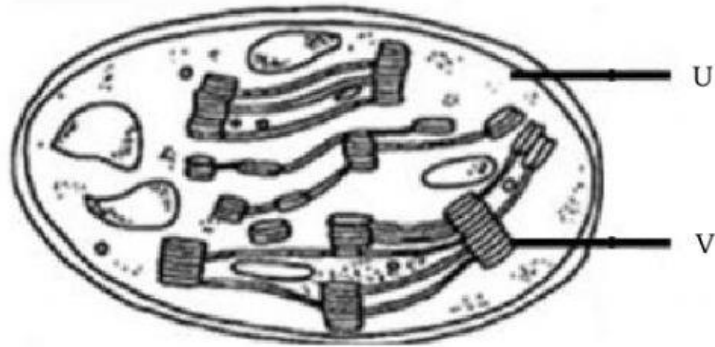
e) Nyatakan pengelasan tisu tumbuhan bagi xilem.

State the classification of plant tissue for xylem.

[1m]

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3. Rajah menunjukkan suatu organel dalam sel tumbuhan.
Diagram shows an organelle in plant cells.



- a) Namakan bahagian yang berlabel;
Name the parts labelled with;

[2m]

U:

V:

- b) Namakan sel dalam tumbuhan yang mengandungi kepadatan tinggi organel di atas.

Name the cell in plants that contains high density of the organelle above.

[1m]

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- c) Apakah fungsi organel di atas kepada sel tumbuhan yang anda namakan?
What is the function of the organelle above to the cell you have named?

[1m]

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- d) Bahagian V adalah tapak tindak balas kimia berlaku yang menghasilkan suatu bahan penting kepada tumbuhan.

Namakan proses yang berlaku dalam tindak balas tersebut dan berikan nama bahan yang terhasil itu.

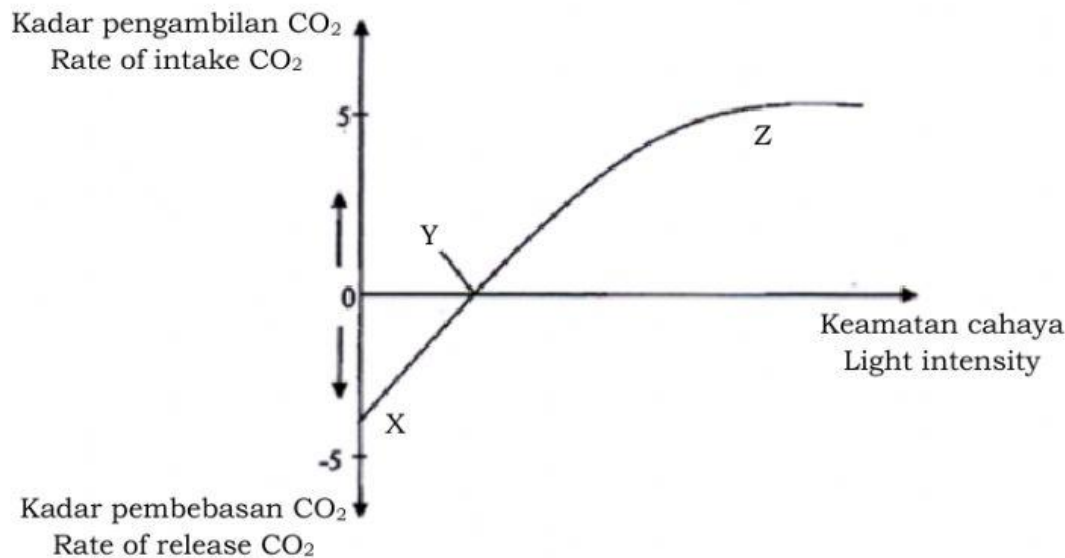
Part V is the site for chemical reaction occurred to produce an important substance for plants.

Name the process that occurred in the reaction and give the name of substance that is produced.

[2m]

4. Rajah menunjukkan graf hubungan antara keamatan cahaya dengan kadar pengambilan dan kadar pembebasan karbon dioksida oleh tumbuhan.

Diagram shows the graph relationship between light intensity and rate of intake and release of carbon dioxide by plants.



- a) Apakah proses utama yang dijalankan oleh tumbuhan semasa titik X?
What is the main process carried out by plants during point X? [1m]

- b) Terangkan apa yang berlaku semasa titik Y.
Explain what has occurred during point Y. [3m]

c) Ramalkan sebab graf tidak terus meningkat selepas titik Z.
Huraikan jawapan anda.

Predict why the graph does not increase after point Z.
Describe your answer.

[2m]

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