WEIGHTED ASSESSMENT 1

SCIENCE
(BOOKLET B)

Total Time (for Booklets A and B): **50 minutes**

INSTRUCTIONS TO CANDIDATES

- Follow ALL instructions carefully.
- Answer ALL questions.

For questions 15 to 19, write your answers in this booklet. The number of marks available is shown in brackets [ ] at the end of each question or part question.

[22 marks]

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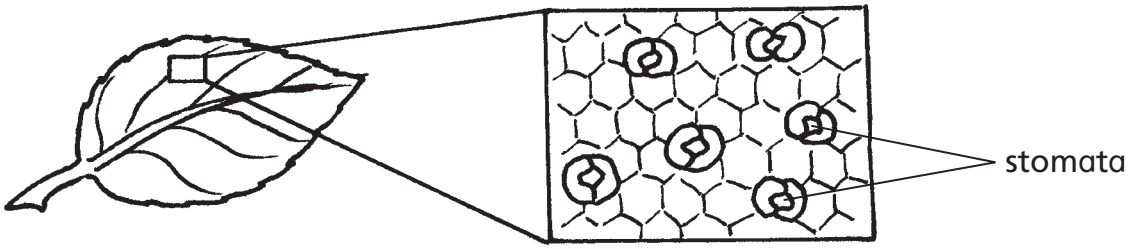
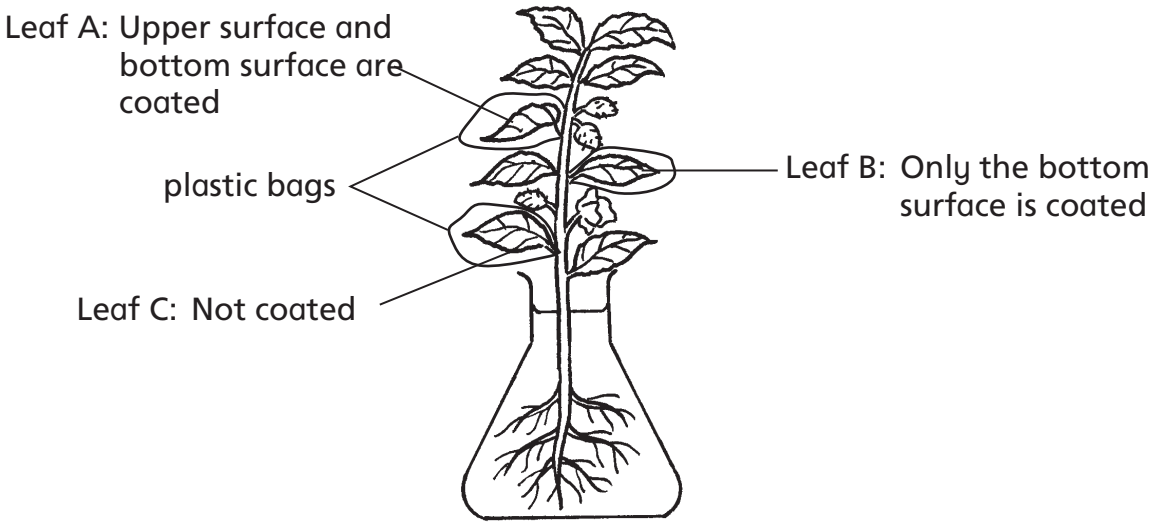
15. The diagram shows a magnified diagram of stomata on a leaf.



Firdaus coated oil on different parts of three leaves of the same plant and covered the leaves with plastic bags as shown.



He noticed that there were water droplets on the inner surface of the plastic bags.

(a) In which plastic bags would he likely to observe the water droplets on the inner surface of the bags? Explain your answer. [2]

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(b) Firdaus wanted to find out whether the bottom surface of a leaf had more stomata than the upper surface. Explain how he can do that. [2]

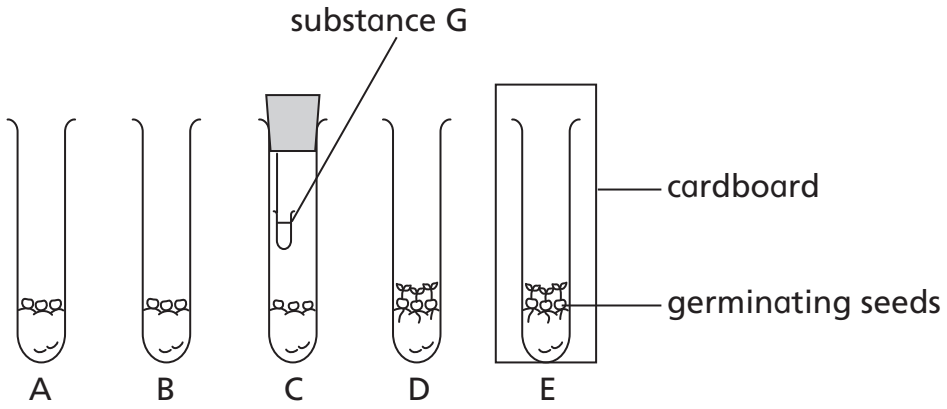
(c) Firdaus found that leaf A turned yellow after a week. Suggest a reason for his observation. [2]

16. Chee Wee removed different parts of three identical flowers on a plant and recorded his observations the flowers after two months as shown.

	Flower A	**Flower B**	**Flower C**	**Flower D**
Part that is removed	Anther	Stigma	Ovary	Petals
Did the flower develop into a fruit after two months?	Yes	No	No	No

Chee Wee concluded that petals are needed for a flower to develop into a fruit. Do you agree? Explain your answer. [2]

17. (a) Kai Jie placed three seeds into each of five test tubes subjected to different conditions. He observed that the seeds in test tubes D and E germinated after some days while the seeds in test tubes A, B and C did not germinate as shown.



Suggest why the seeds in test tubes A, B and C did not germinate. [2]

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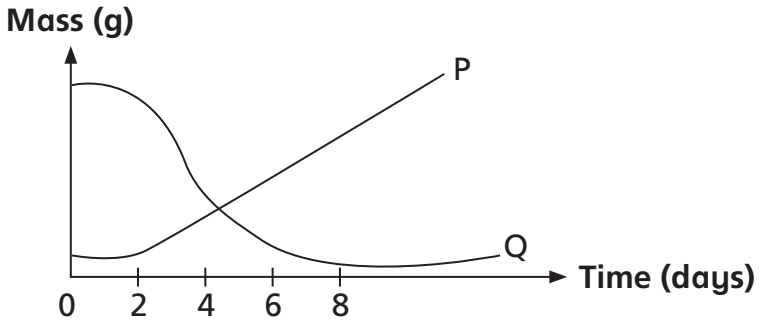
(b) The diagram shows a seed germinating into a seedling.

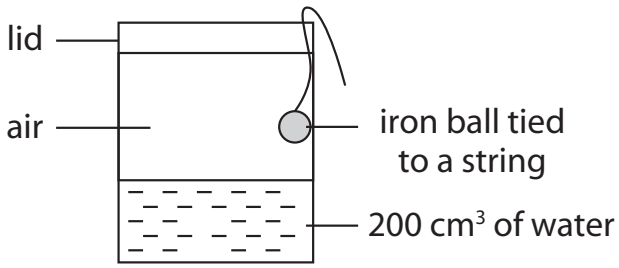
On the above diagram, label the seed leaves and draw arrows to show the movement of food. [2]

(c) The diagram below shows a graph



Which line, P or Q, represents the seed leaves? Explain your answer. [2]

18. Henry set up the following using a 500 cm^3 container. The iron ball has a volume of 30 cm^3.



The string inside the container broke and the iron ball dropped.

(a) In terms of forces, explain why the string broke. [1]

(b) What would the volume of air be after the iron ball dropped into the water? Explain your answer. [2]

(c) State the energy conversions that occur when the iron ball dropped into the water. [2]

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19. Nolan gives a push on an ice block at position A. The ice block moves past position B and stops at position C.

(a) Name two forces that act on the block at position B and state the direction of the forces. [2]

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(b) In terms of energy, explain why the ice block stops at C. [1]

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