

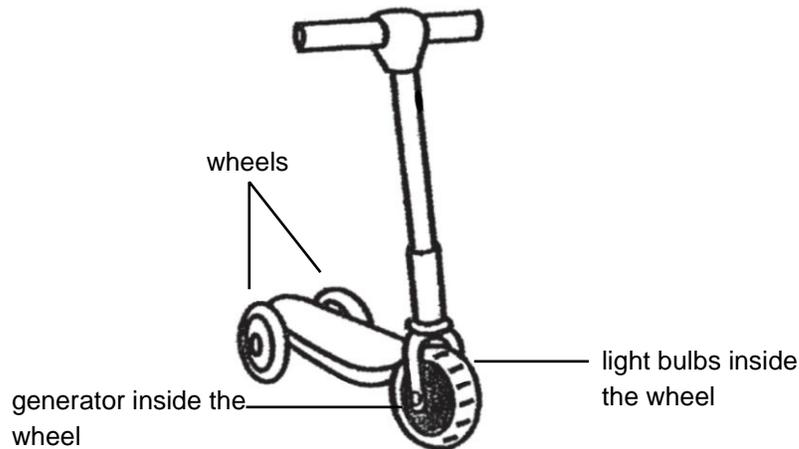
PSLE SCIENCE

BOOKLET B

Section B (44 marks)

For questions 29 to 41, write your answers in this booklet. The number of marks available in the brackets [] at the end of each question or part question.

29. The diagram below shows Salleh's skate scooter.



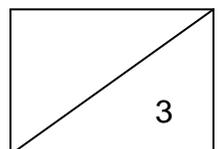
When Salleh pushes off, the skate scooter will move and the bulbs in the front wheel will light up.

(a) What material should the front wheel be made from? Explain your answer.

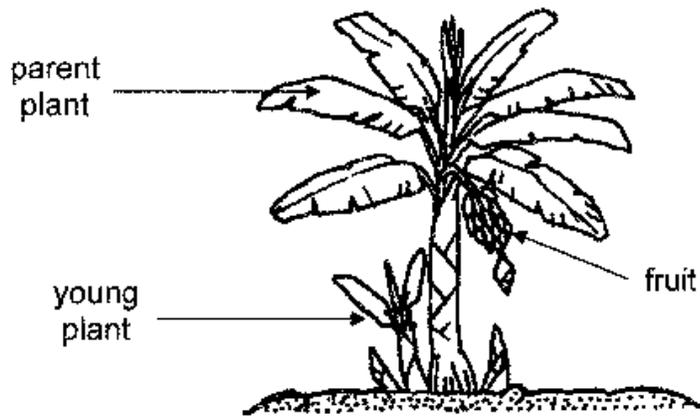
(2m)

(b) Salleh noticed that the brightness of the bulbs decreased when he was moving at a slower speed. Explain why the brightness of the bulb decreased.

(1m)



30. The diagram below shows some banana plants.



(a) Why does the young plant grow so close to the parent plant

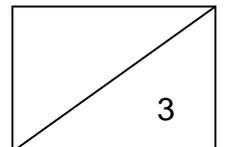
(1m)

(b) In which part of the plant is the excess sugar produced during photosynthesis stored?

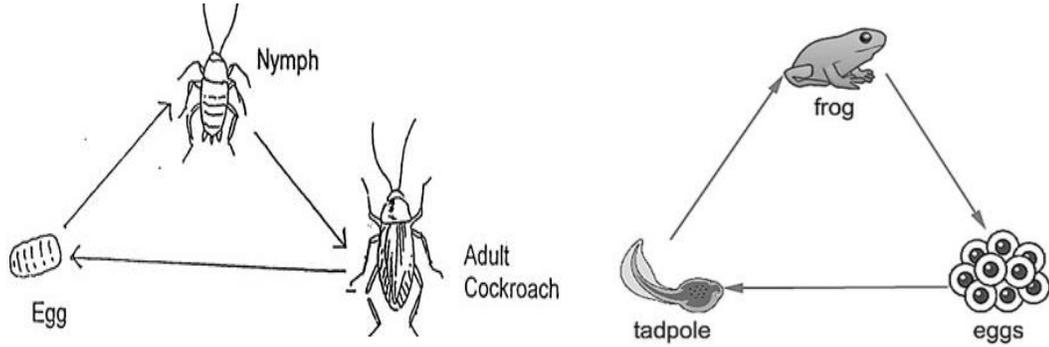
(1m)

(c) Name another plant that reproduces in the same way as the banana plant.

(1m)



31. The pictures below show the lifecycles of the cockroach and the frog.

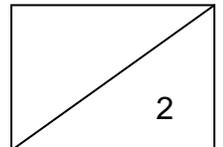


(a) Based on the pictures above, state **one** similarity in the **lifecycles** of the cockroach and the frog.

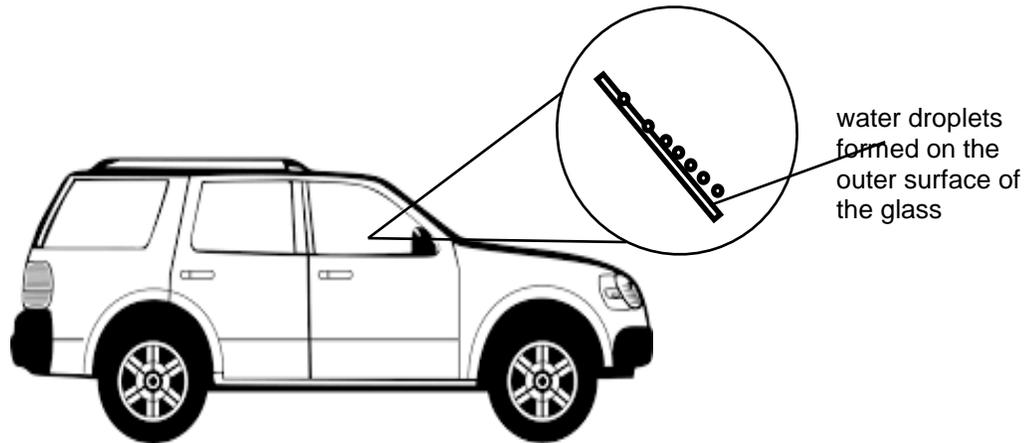
(1m)

(b) State **one** difference between the **life-cycles** of the cockroach and the frog.

(1m)



32. The diagram below shows the side view of the same car some time after the air-condition was turned on.

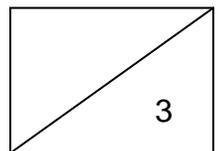


- (a) Explain how water droplets were formed on the outer surface of the glass

(1m)

- (b) Explain why, on rainy days, the inner surface of the window may be fogged up.

(2m)



33. Siti dropped some shorea fruits from a certain height. She then recorded the distance these fruits travelled in a table as shown below.



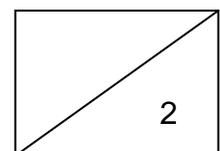
Shorea	Length of wing-like structure (cm)	Distance travelled (cm)
A	2	29
B	3	42
C	4	47
D	5	51
E	4	53
F	5	60

- (a) What is the relationship between the length of the wing-like structure and the distance travelled by the shorea fruit?

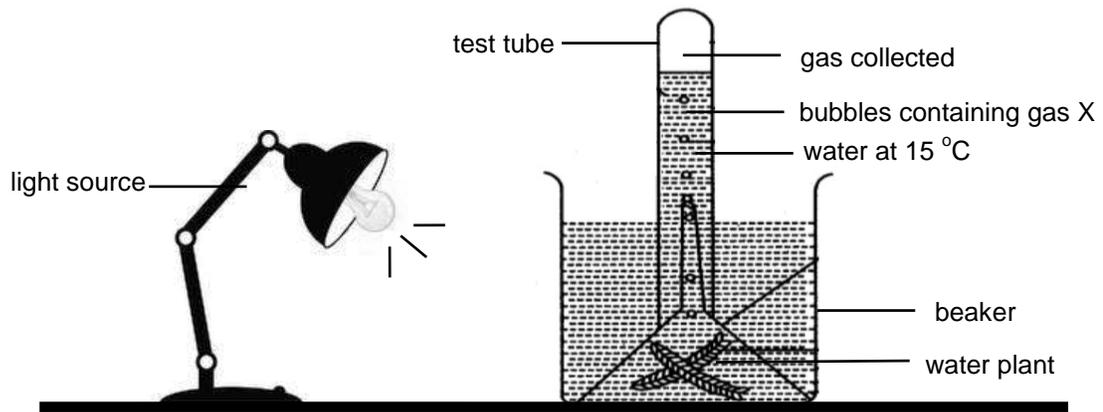
(1m)

- (b) Besides the length of the wing-like structure, what other factors can affect the distance travelled by the shorea fruit?

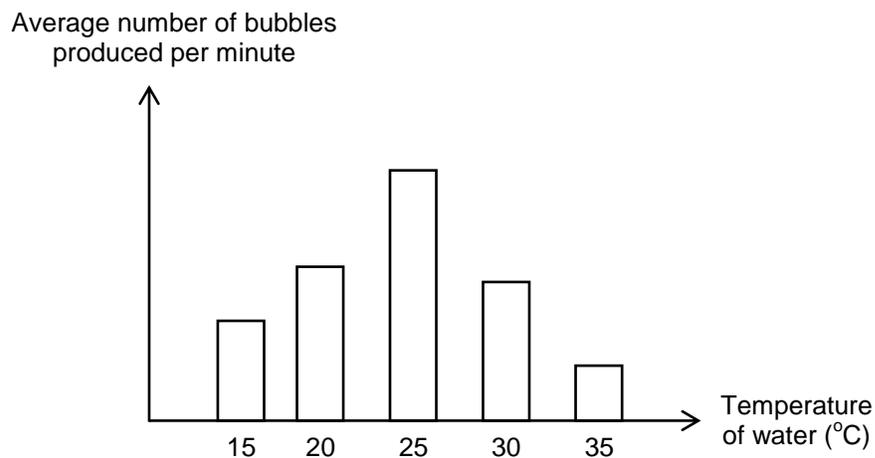
(1m)



34. Jannah conducted an experiment to find out how the temperature of water affects the rate of photosynthesis of a water plant. She set up the experiment as shown below and measured the average number of bubbles produced by the water plant per minute.



Jannah repeated the experiment using four other similar set-ups while changing only the temperature of the water for each set-up. Her results are shown below.

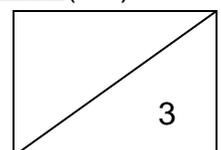


- (a) Without adding or removing any part of the experiment set-up, how can Jannah increase the number of bubbles produced at any given temperature?

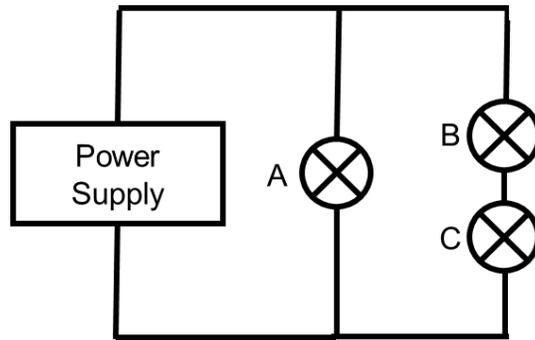
(1m)

- (b) Based on the results, how did the temperature of water affect the rate of photosynthesis. Subsequently, suggest why this was so.

(2m)



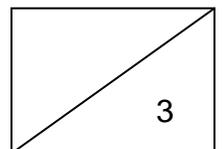
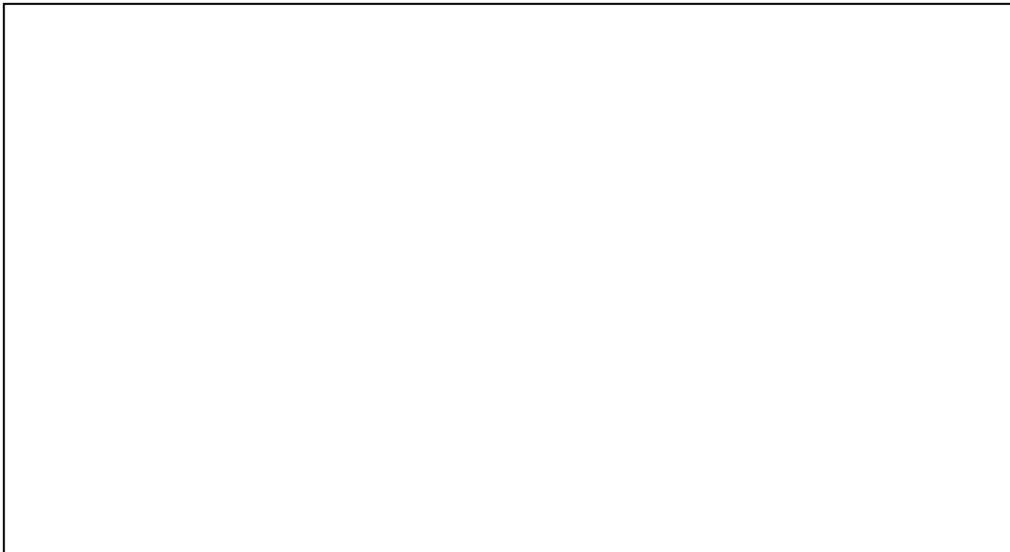
35. The diagram below shows the electrical wiring of the lighting system in a house. The power supply is connected to similar lights A, B, and C, .



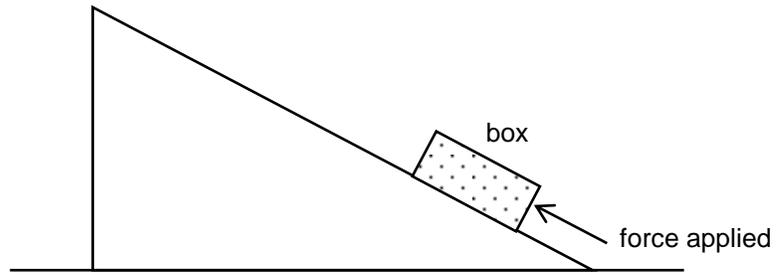
- (a) What is the advantage of this circuit?

_____ (1m)

- (b) Redraw the circuit in the space below using lights A, B, and C and a switch such that the 3 lights can be controlled by one switch. (2m)



36. A box is being pushed up a slope as shown below.

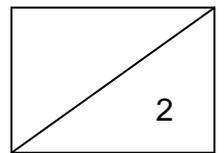


(a) Explain why the box could be pushed up the slope.

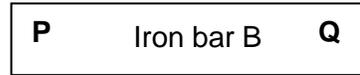
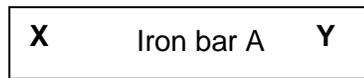
(1m)

(b) Without changing any of the components of the set-up above, suggest one way to make it easier to push the box up the slope.

(1m)



37. Garrett has two iron bars A and B and he puts them near each other.



- (a) He notices that they are attracted and thus concluded that the two pieces are magnets. Do you agree with him? Explain why.

(1m)

- (b) He turns Iron bar A such that end X faces P. How will this confirm that the two pieces are magnets?

(2m)

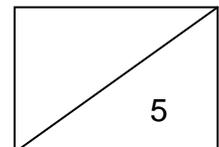
- (c) State **one** way in which a magnet may:

(i) lose its magnetism

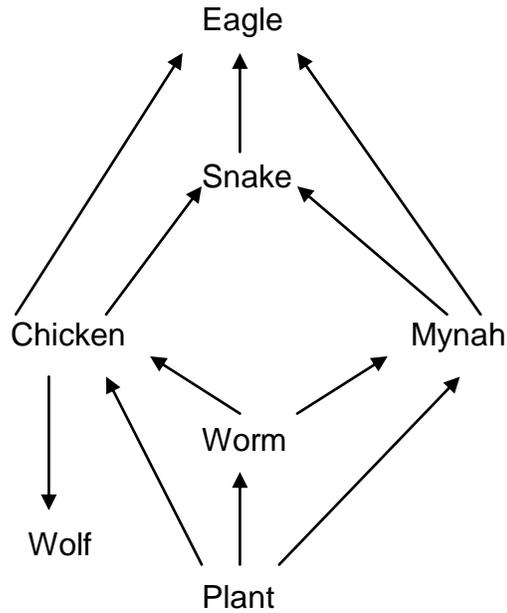
(1m)

(ii) gain magnetism

(1m)



38. Look at the food web below and answer the following questions.

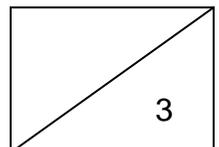


(a) Name two animals which are both a predator and a prey.

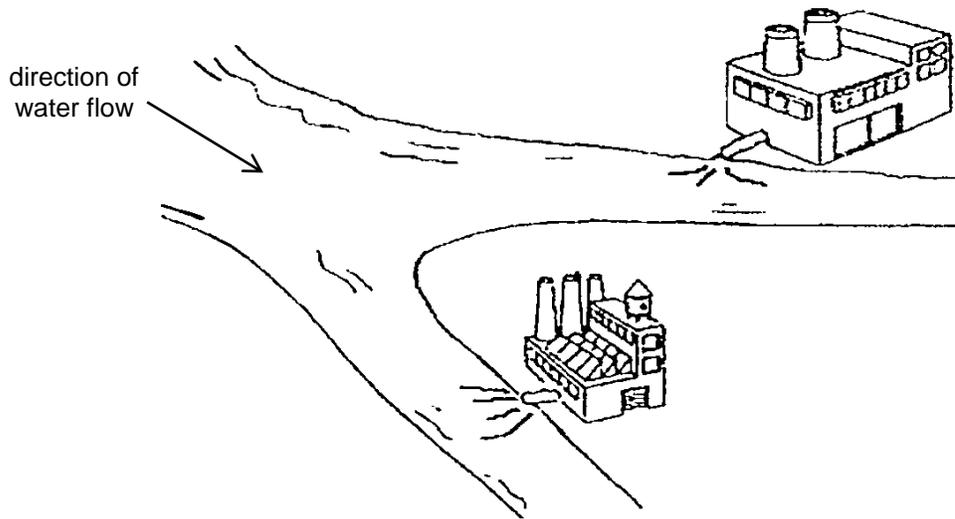
(2m)

(b) How is it possible for the snake population to increase even though the populations of the chicken and mynah do not increase?

(1m)



39. The Environmental Ministry is concerned that polluted water is being washed into the rivers as seen in the picture below.



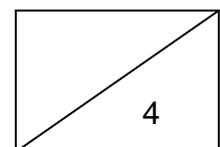
- (a) On the picture above, mark with a cross (X) the locations environmental officers must collect and test samples from to check if polluted has indeed been washed into the rivers. (1m)

- (b) In order to test the level of pollution, the environmental officers took samples of river water from various locations and poured them into similar beakers. Substance P was then added into each beaker. Substance P will change colour depending on the level of pollution. State two variable(s) must the officers keep the same to ensure a fair test?

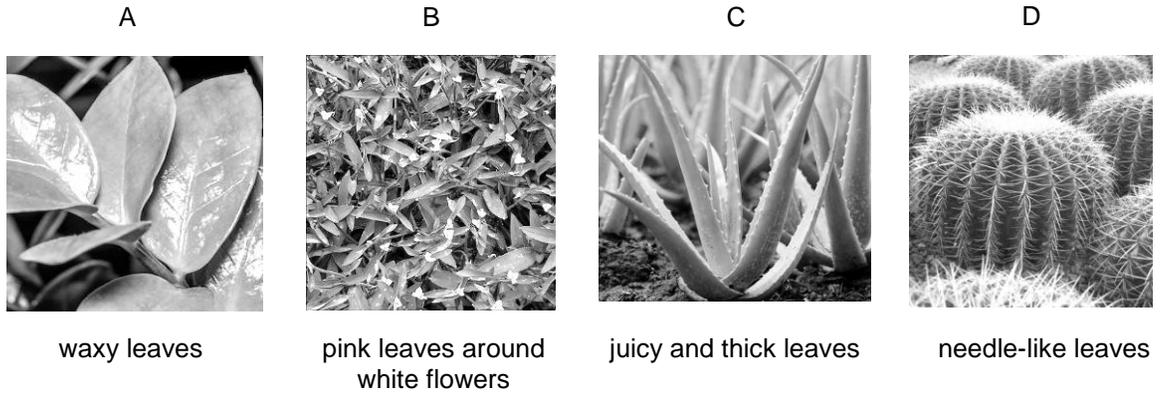
(2m)

- (c) How will polluted water affect the survivability of submerged plants in the river?

(1m)



40. The pictures below show four plants with descriptions of each plant's special features.

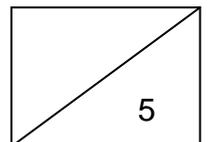


(a) In the table below, write down **one** benefit for each structural adaptation described in the pictures above. (4m)

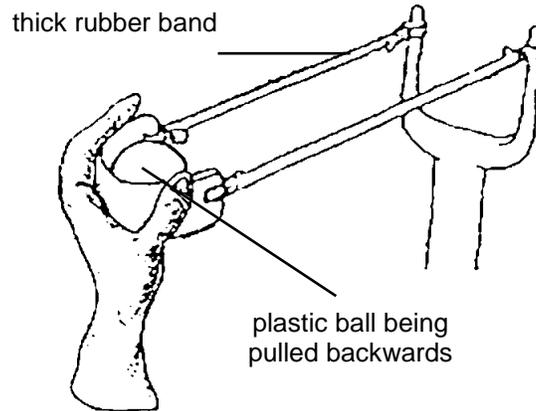
Structural Adaptation	Benefit for the plant
waxy leaves	
pink leaves around white flowers	
juicy and thick leaves	
needle-like leaves	

(b) Write down another benefit for the structural adaptation for Plant D

_____ (1m)



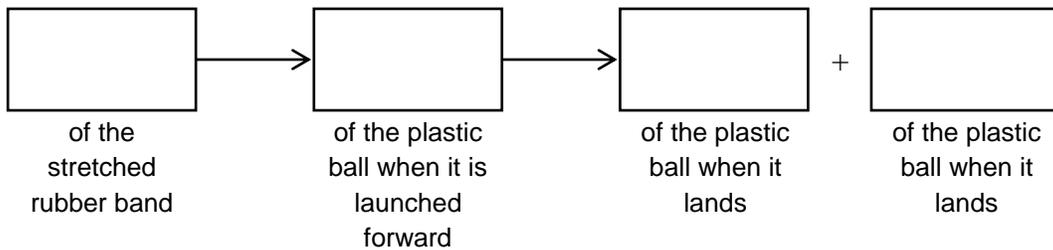
41. Hirman used a slingshot to launch a plastic ball as shown in the diagram below.



(a) Where did Hirman get the energy to pull the rubber band from?

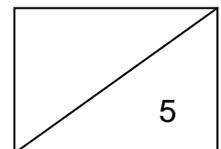
(1m)

(b) State the energy conversions from the point when the ball was released to the point when the ball hits the ground. (2m)



(c) Without adding, changing or removing anything, how can Hirman increase the distance travelled by the rubber ball? Explain your answer

(2m)



End of Booklet B