



Nan Hua Primary School
Primary 5 Science
Term 3 Weighted Assessment 2024

| Marks | |
|------------|-----|
| Section A: | /10 |
| Section B: | /10 |
| Total: | /20 |

Name: _____ ()

Class: Primary 5/ _____

Date: _____

Duration: 30 minutes

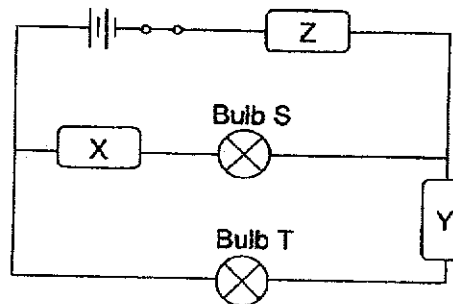
Parent's Signature _____

Answer all questions.

Section A: (5 x 2 marks = 10 marks)

For each question from 1 to 5, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write your answer in the bracket provided.

1 Study the circuit diagram below.



Raju wants to find out which of the three materials, X, Y or Z, is/are conductor(s) of electricity. Only bulb S lights up when the switch is closed.

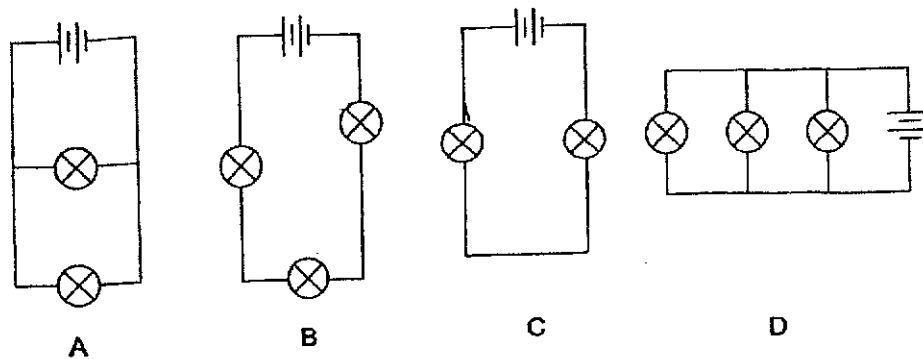
What conclusion can he make from the above observation?

| | Electrical conductor(s) | Electrical insulator(s) |
|-----|-------------------------|-------------------------|
| (1) | Z only | X and Y |
| (2) | X and Y | Z only |
| (3) | X and Z | Y only |
| (4) | Y and Z | X only |

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This booklet consists of 10 printed pages.

- 2 Kok Leong sets up four circuits using identical batteries and bulbs in working condition.

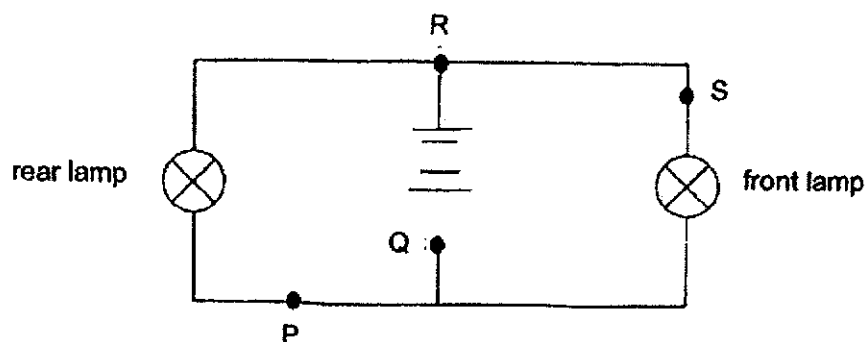


Which of the bulbs in the two circuits above have the same brightness?

- (1) A and C only
 (2) A and D only
 (3) B and C only
 (4) B and D only

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- 3 David's bicycle has front and rear lamps. Both lamps are connected to the same set of batteries. The circuit diagram for the lamps is drawn below.



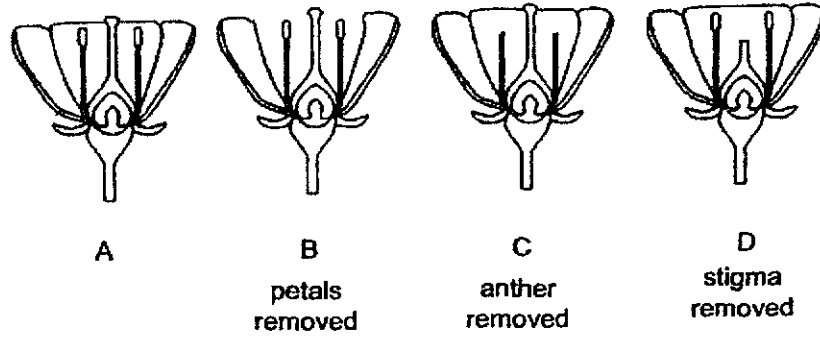
At which position, P, Q, R or S, should a switch be placed such that only the front lamp can be turned on and off?

- (1) P
- (2) Q
- (3) R
- (4) S

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- 4 Flowers A, B, C and D from the same plant were used in an experiment. Josephine removed some parts from flowers B, C and D while flower A was left untouched.



If there were pollinators to carry out pollination, which flower(s) would most likely develop into fruit(s)?

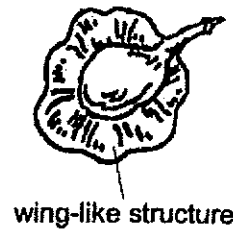
- (1) flower A only
 (2) flowers A and B only
 (3) flowers C and D only
 (4) flowers A, B and C only

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5 The diagrams below show the fruits of three different plants.



Fruit A

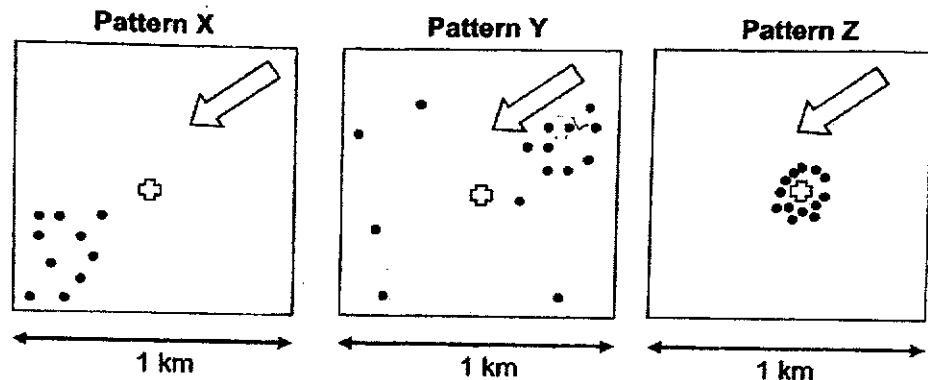


Fruit B



Fruit C

The following diagrams show three possible dispersal patterns, X, Y and Z.



Legend:

- parent plant
- young plant
- direction of wind

Which of the following represents the dispersal pattern of fruits A, B and C respectively?

| | Pattern X | Pattern Y | Pattern Z |
|-----|-----------|-----------|-----------|
| (1) | fruit A | fruit B | fruit C |
| (2) | fruit B | fruit A | fruit C |
| (3) | fruit B | fruit C | fruit A |
| (4) | fruit C | fruit A | fruit B |

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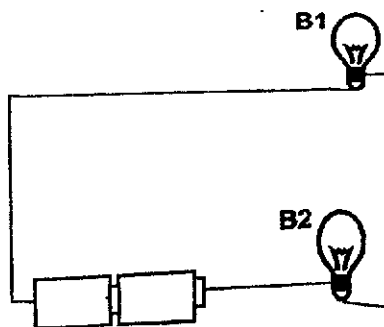
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| | |
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| Score | 10 |
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Section B: Structured questions (10m)

For questions 6 to 8, write your answers in the space provided. The number of marks available is shown in brackets [] at the end of each question or part question.

- 6 Study circuit Y below.



Circuit Y

- (a) Put a tick (✓) if the statement is true.

[1]

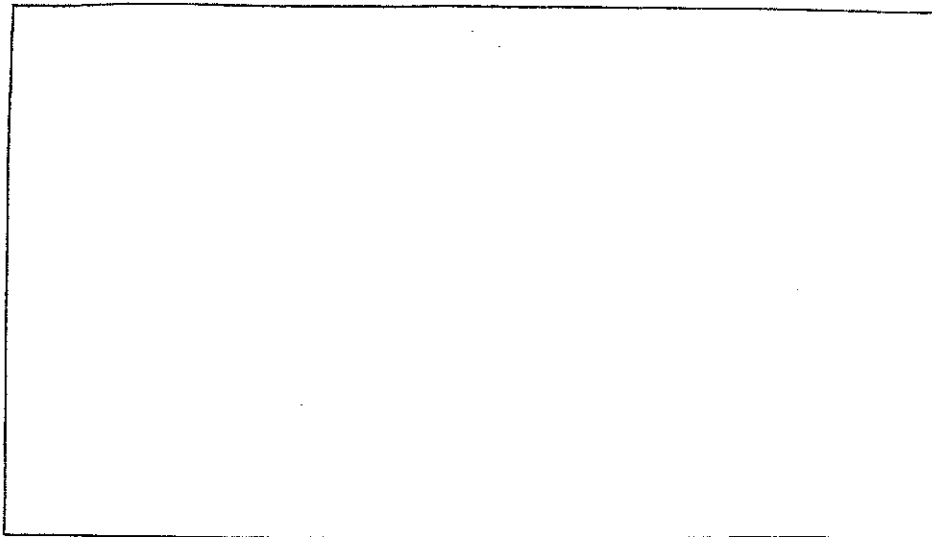
| | Statement | Tick (✓) if true |
|-------|--|------------------|
| (i) | The bulbs are arranged in series. | |
| (ii) | The bulbs are arranged in parallel. | |
| (iii) | Both bulbs, B1 and B2, have the same brightness. | |
| (iv) | Bulb B1 will be brighter than bulb B2. | |

- (b) State one disadvantage of using such bulb arrangement as shown in circuit Y.

[1]

- (c) Using the same number of bulbs and batteries as in circuit Y, draw, using symbols, a **circuit diagram** in the box below such that each of the bulbs will shine more brightly than each of the bulbs in circuit Y.

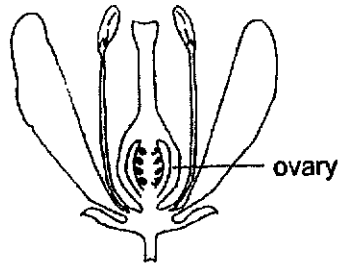
[2]



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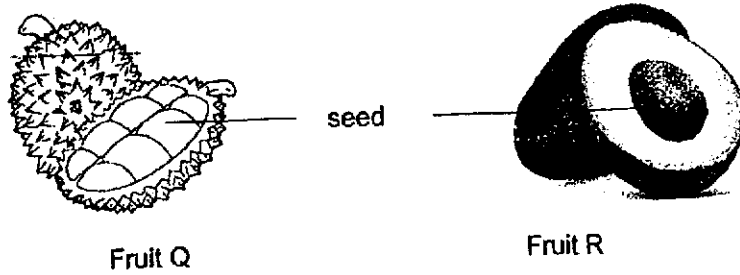
7 The diagram below shows flower G.



Flower G

(a) Fertilisation occurs and flower G develops into a fruit. State what fertilisation is in flowering plants. [1]

The diagram below shows the cross-section of fruits Q and R.

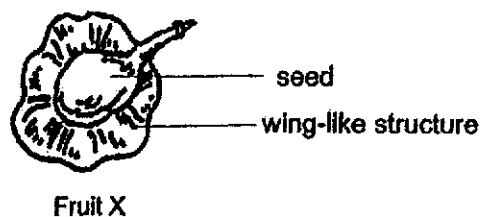


(b) Which fruit, Q or R, is most likely the fruit of flower G? Explain your answer. [1]

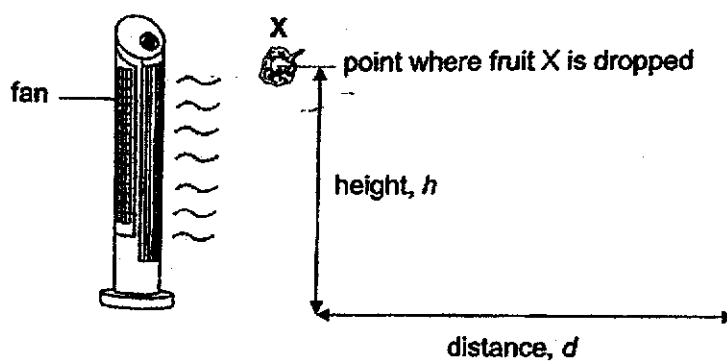
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- 8 Farhana wanted to find out how the wing-like structure of fruit X would affect the distance it travelled.



She dropped fruit X from a height, h , in front of a fan as shown. She measured the distance, d , travelled by fruit X.

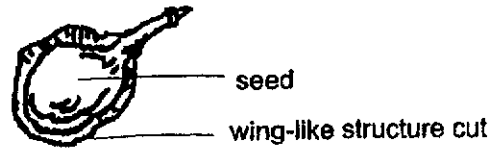


- (a) How does the wing-like structure help in the seed dispersal?

[2]

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Next, she cut part of the wing-like structure of fruit X and repeated the experiment above.



- (b) How would the distance, d , change after part of the wing-like structure of fruit X was cut? [1]

- (c) Other than using the same fruit X with its wing-like structure cut, suggest one variable that Farhana has to keep constant when conducting the experiment. [1]

End of Paper

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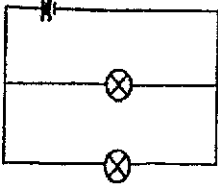
P5 Science WA3

Answer Key

Section A

| No. | Answer |
|-----|--------|
| 1 | 3 |
| 2 | 2 |
| 3 | 4 |
| 4 | 5 |
| 5 | 3 |

Section B

| No. | Answer |
|-----|--|
| 6a | (i) & (iii) |
| 6b | If one bulb fuses in the circuit, the other bulb will also not light up. OR The bulbs cannot be controlled/ switch on independently. |
| 6c |  |
| 7a | Fertilisation is when the male reproductive cell fuses with the female reproductive cell (egg cell). |
| 7b | Fruit Q. Flower G has a few/ several ovules which will develop into a few/ several seeds in its fruit after fertilisation as shown in fruit Q. |
| 8a | The wing-like structure helps the fruit stay afloat longer in the air so that it will be carried by the wind to a distance further away from the parent plant. |
| 8b | When part of the wing-like structure of fruit X was cut, the distance, d, would become shorter. |
| 8c | Possible answers: <ul style="list-style-type: none"> • Type of fan • Speed of fan • Height at which the fruit is dropped |

