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

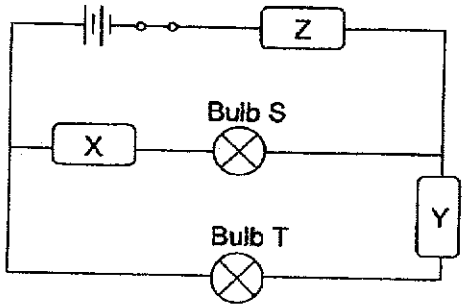
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Parent's Signature

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 switched is closed.

What conclusion can he make from the above observation?

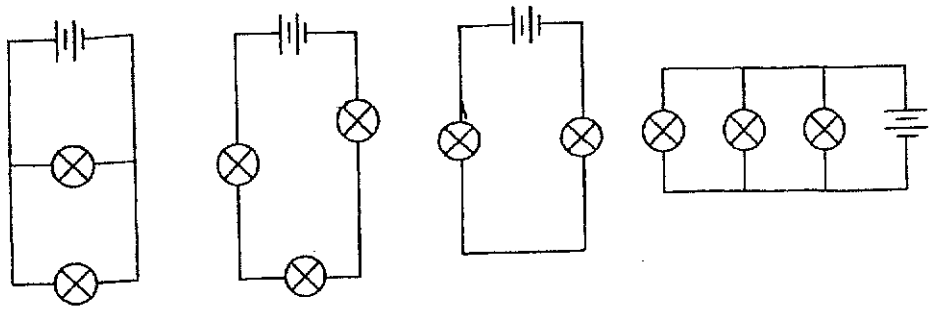
	Electrical conductor(s)	Electrical insulator(s)
(1)	Z only	X and Y
(2)	X and Y	Z only
(3)	X and Z	Y only
(4)	Y and Z	X only

( )

This booklet consists of **10** printed pages.

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



A B C D

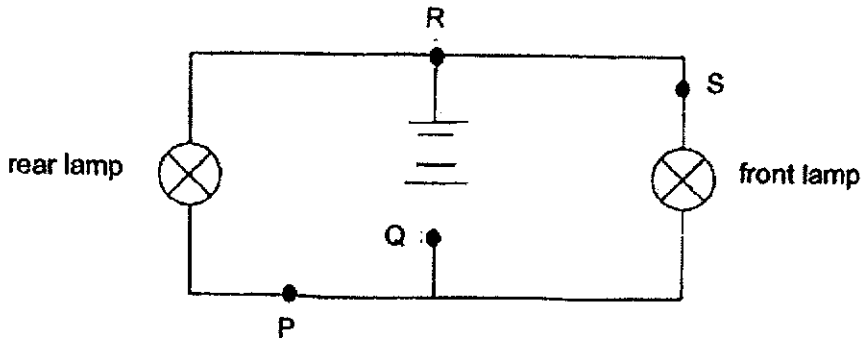
Which of the bulbs in the two circuits above have the same brightness?

(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?

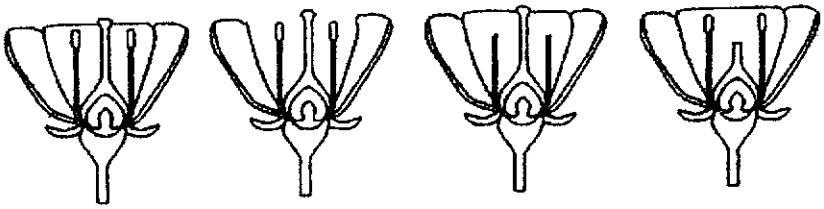
(1) P
(2) Q
(3) R
(4) S

( )

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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.



A | B petals removed | C anther removed | D stigma removed

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

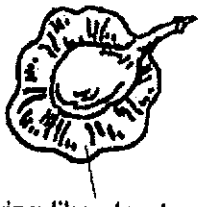
(1) flower A only
(2) flowers A and B only
(3) flowers C and D only
(4) flowers A, B and C only ( )

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



Fruit A

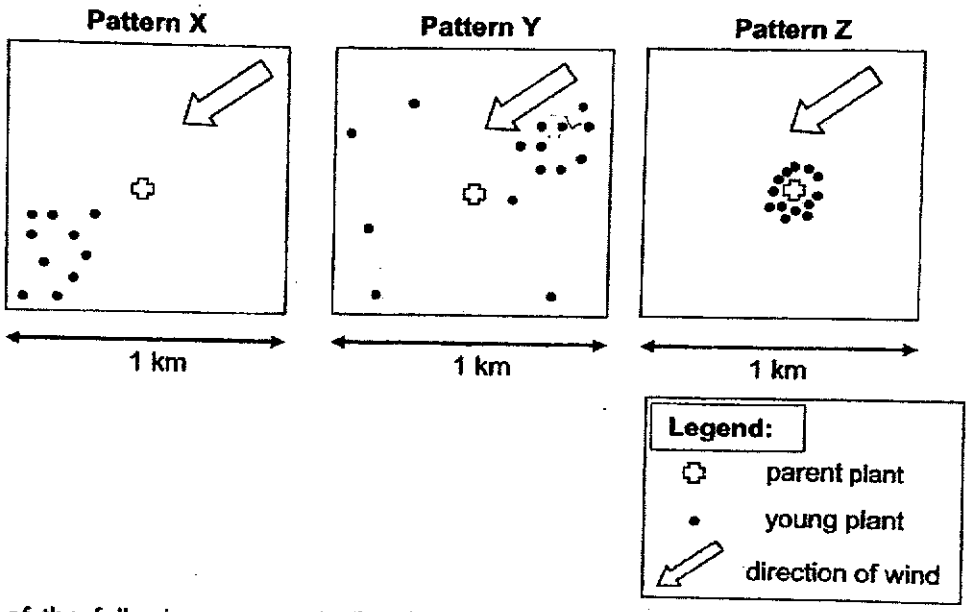


Fruit B



Fruit C

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



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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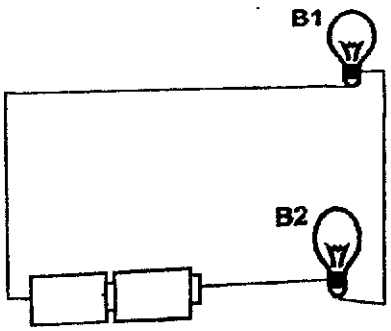
Score / 10

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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]

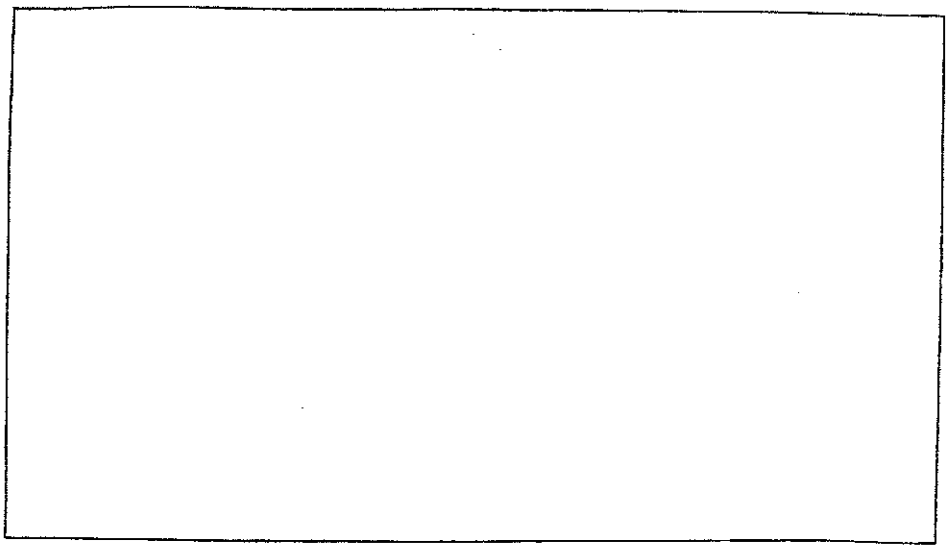
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(c) Using the same number of bulbs and batteries as in circuit Y, draw, using symbols, a **circuit diagram** in the box below such that each of the bulbs will shine more brightly than each of the bulbs in circuit Y.

[2]

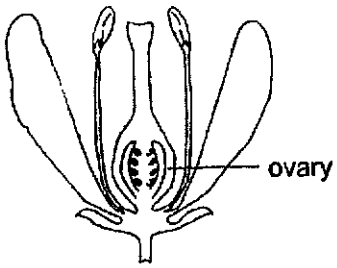


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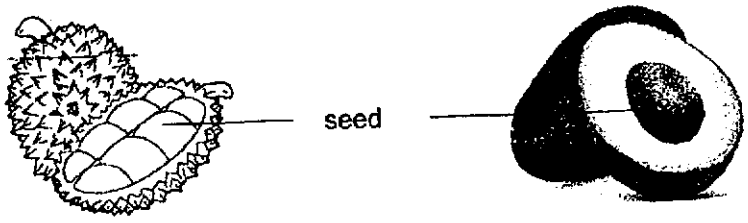
7 The diagram below shows flower G.



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.



Fruit Q

Fruit R

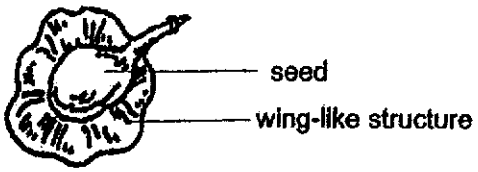
(b) Which fruit, Q or R, is most likely the fruit of flower G? Explain your answer. [1]

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Score	2

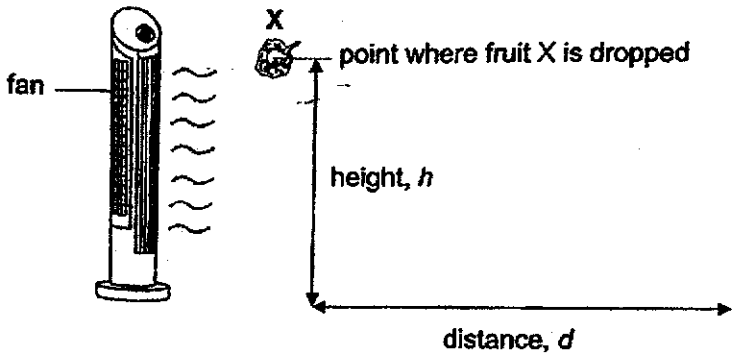
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8 Farhana wanted to find out how the wing-like structure of fruit X would affect the distance it travelled.



Fruit X

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

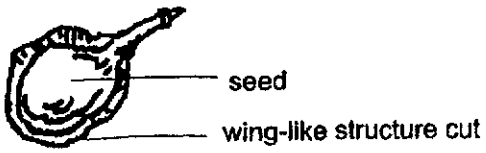


(a) How does the wing-like structure help in the seed dispersal? [2]

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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

Score	
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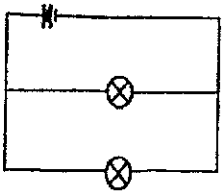
P5 Science WA3

Answer Key

Section A

No.	Answer
1	3
2	2
3	4
4	3
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: • Type of fan • Speed of fan • Height at which the fruit is dropped

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