METHODIST GIRLS' SCHOOL

Founded in 1887

Weighted Assessment 3 2024
PRIMARY 5
SCIENCE

Total Time: 45 minutes

INSTRUCTIONS TO CANDIDATES
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.

Name: _____ ( )

Class: Primary 5.___

Date: _____

Parent's Signature: _____

Section A	18
Section B	12
Total	30

This booklet consists of 9 printed pages including this page.

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Section A: For each question from 1 to 9, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet (OAS).

[18 marks]

1 Simon set up a circuit as shown Figure 1 below. He observed that only bulb B lit up.

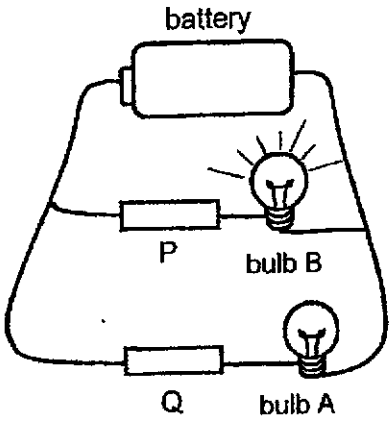


Figure 1

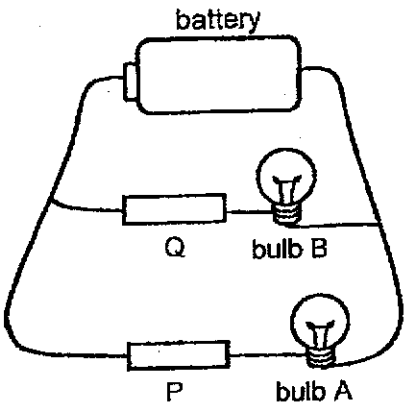


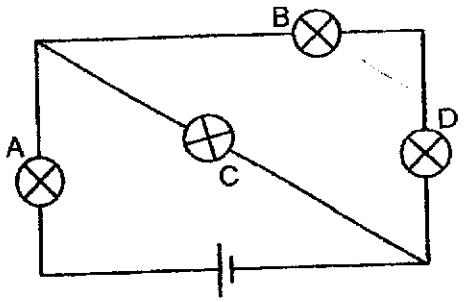
Figure 2

He then swapped P and Q, as shown in Figure 2, and observed that none of the bulbs lit up.

Which one of the following is correct?

	Bulb not working	Electrical insulator
(1)	A	P
(2)	B	P
(3)	A	Q
(4)	B	Q

2 Study the circuit below.



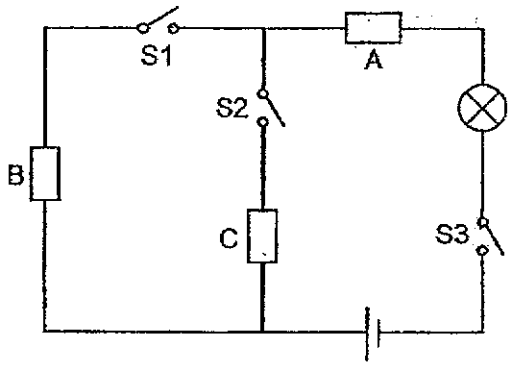
When one of the bulbs had blown, all the other bulbs did not light up. Which one of the bulbs had blown?

(1) A
(2) B
(3) C
(4) D

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3 Anne constructed an electrical circuit as shown in the diagram below.



She placed objects A, B and C, at various points in the circuit. These objects can include metal plate, rubber band or toothpick.

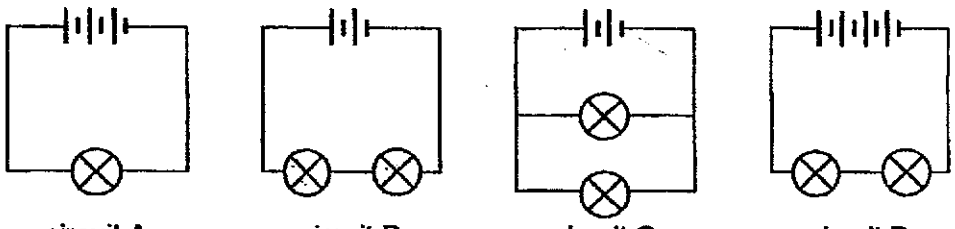
Anne closed some switches and recorded her observation in the table below.

Switches closed	Did the bulb light up?
S1 and S3	No
S2 and S3	Yes

Which one of the following correctly shows objects placed at points A, B and C?

	A	B	C
(1)	toothpick	metal plate	rubber band
(2)	metal plate	toothpick	metal plate
(3)	rubber band	toothpick	metal plate
(4)	metal plate	metal pin	toothpick

4 The diagrams below show four different electrical circuits, A, B, C and D.



circuit A circuit B circuit C circuit D

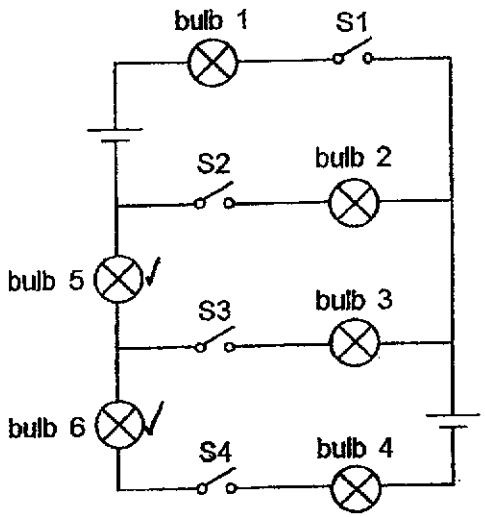
In which of the above circuits do the bulbs have the same brightness?

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

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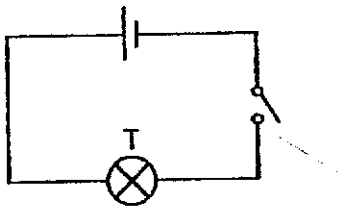
5 Ben set up a circuit as shown below. The batteries, bulbs and switches are all working properly.



Which of the following switches, S1, S2, S3 and S4, must be closed for bulbs 2, 4, 5 and 6 only to light up?

(1) S1 and S4 only
(2) S2 and S3 only
(3) S2 and S4 only
(4) S3 and S4 only

6 Zhiming conducted an experiment using the set-up as shown below. He closed the switch and measured the amount of light given off by bulb T.



Next, he connected another identical bulb U and a switch to the circuit above. He closed the switches and measured the amount of light of bulb T to be different.

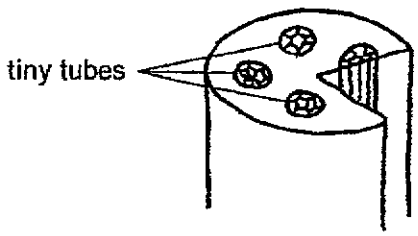
Which of the following statements about the circuit in Zhiming's second experiment is correct?

(1) Each bulb can be switched on or off independently.
(2) When one bulb is spoilt, the other bulb can still light up.
(3) Different amount of electric current flow through bulbs T and U.
(4) There is only one path for electric current to flow through the circuit.

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7 The diagram below shows the cross-section of a stem.

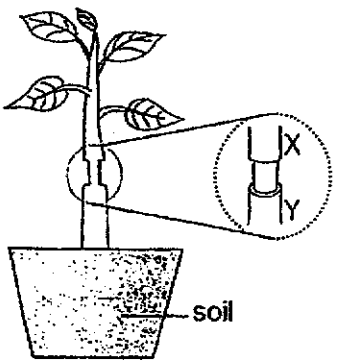


Which of the following statement(s) is/are correct?

E The tiny tubes help to hold the plant upright.
F Some of the tiny tubes absorb water for the plant.
G All the tiny tubes transport water from the roots to all parts of the plant.
H Some of the tiny tubes transport food from the leaves to all parts of the plant.

(1) E only
(2) H only
(3) E and F only
(4) G and H only

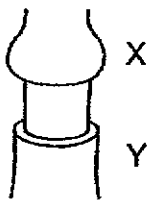
8 Lina removed an outer ring of the stem between positions X and Y of a plant as shown below.



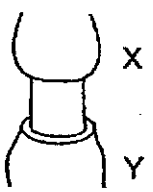
The food-carrying tubes between positions X and Y were removed while the water-carrying tubes remained in the stem.

After some time, which one of the following diagrams represents the appearance of the stem?

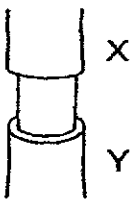
(1)



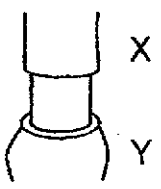
(2)



(3)



(4)



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9 Jasmine split a celery stalk and placed one half of the split stalk into a beaker of water with red food dye. She made a cut into the other half of the celery stalk before placing the other half of the stalk in a beaker with blue food dye as shown in diagram 1.

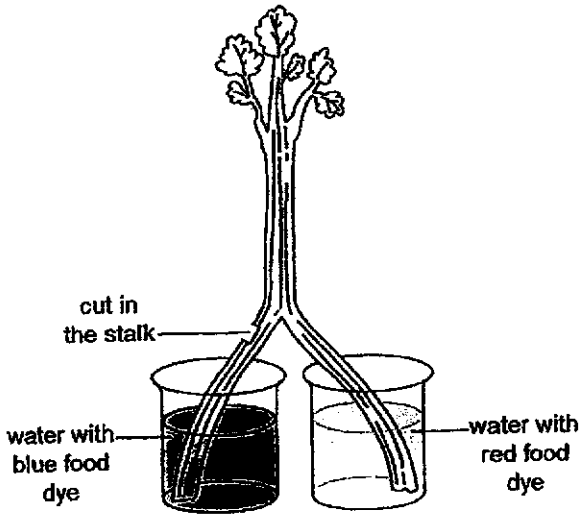


Diagram 1

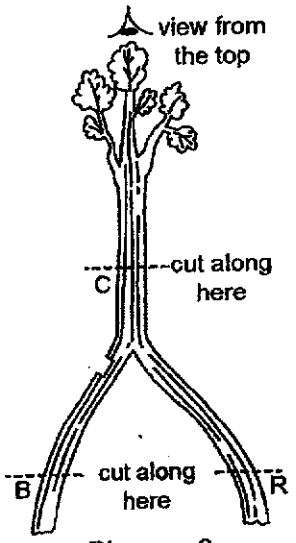
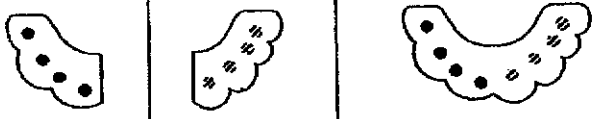
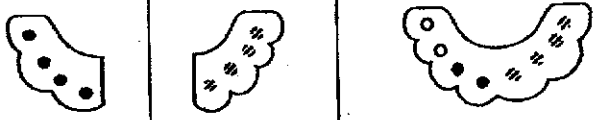


Diagram 2

She removed the celery stalk from the beakers after 8 hours and dried it with a paper towel. Then she cut the celery along the dotted lines as shown diagram 2 and viewed the cut surfaces of the stalk, B, R and C, from the top of the stalk.

Which one of the following shows her observation correctly?

	Cut surfaces view from the top of the stalk		
	B	R	C
(1)			
(2)			
(3)			
(4)			

Legend:
- ⁄ red stain
- • blue stain
- o no stain

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Section B: For questions 10 to 12, write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

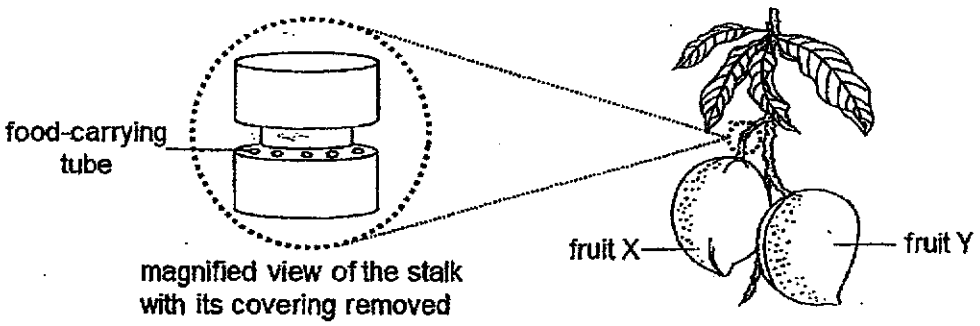
[12 marks]

10 Some parts of a plant are shown below.

flowers	stem
leaves	roots

(a) Draw arrows ⟶ in the diagram above to show how food is transported in a plant. [1]

(b) Two fruits of similar size were found growing on a tree. The gardener removed the outer ring from a stalk as shown below. The food-carrying tubes were removed while the water-carrying tubes remained in the stalk.



(b) Fruit Y grew bigger over time. Explain this observation. [2]

_____

_____

_____

3

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11 Faizal set up a circuit as shown in diagram 3. The latch held the movable arm in place. When he closed the switch, the bulb lit up.

He added two batteries to the circuit and closed the switch. After a few seconds, the latch moved towards the iron bar and the movable arm sprang upwards, as shown in diagram 4.

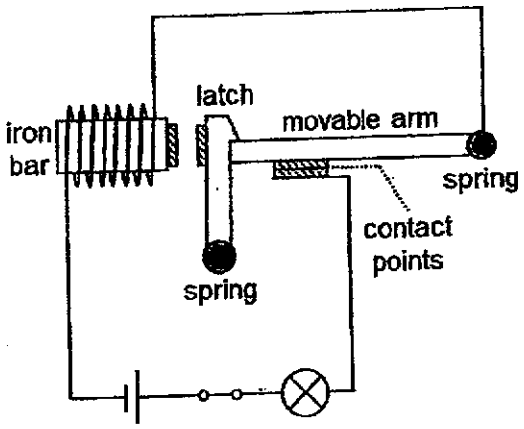


Diagram 3

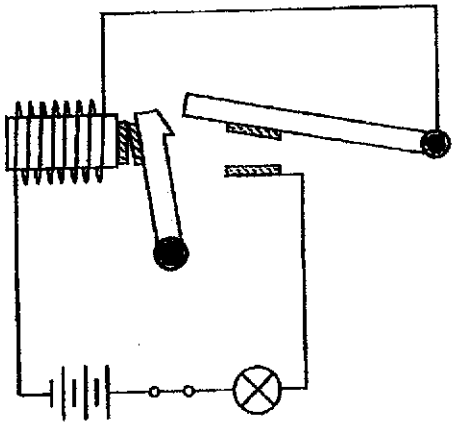


Diagram 4

(a) What is a suitable material for making the movable arm? Explain your answer. [1]

(b) State the property of material of the latch so that it moved as described. [1]

(c) Explain how the circuit works to stop a large flow of electricity going through as shown in diagram 4. [2]

4

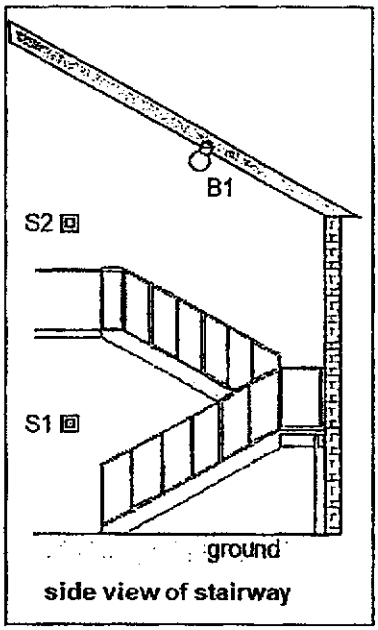
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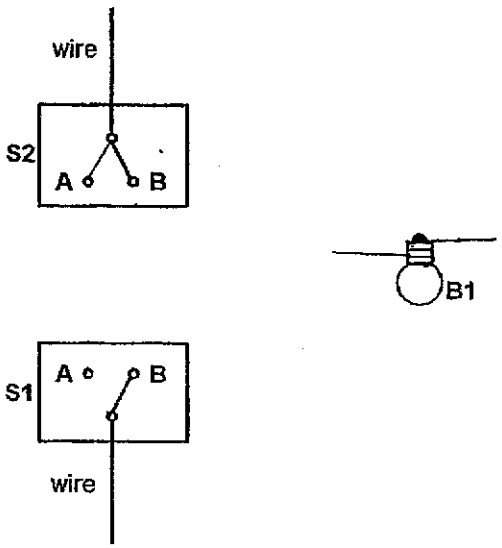
12 A toy house has a bulb B1 at the stairway which can be controlled by two switches. S1 is located at the bottom of the stairway and S2 at the top of the stairway. Each switch can be turned to position A or position B.

Position of switch		
Switch 1	**Switch 2**	**Did the bulbs light up?**
A	A	Yes
A	B	No
B	A	No
B	B	Yes

The diagrams below show the side view of the stairway and part of the circuit.



side view of stairway



circuit diagram

(a) Complete the circuit so that it will work as described. [3]

(b) John added a new bulb B2 to the circuit and made the stairway brighter. Describe how he would have connected B2 to B1. [1]

_____

_____

(c) When the bulbs were switched on, B1 fused. How would B2 be affected? [1]

_____

5

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EXAM PAPER 2024

LEVEL : PRIMARY 5

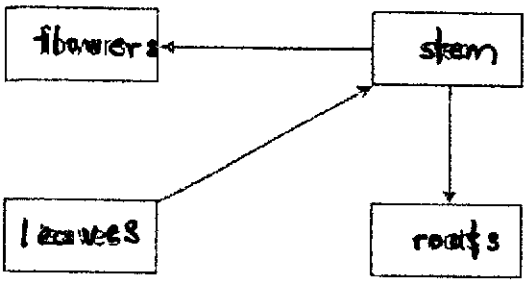
SCHOOL : METHODIST GIRLS' SCHOOL

SUBJECT : SCIENCE

TERM : WEIGHTED ASSESSMENT 3

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9.
3	1	2	4	3	4	2	1	3

Q10. a)



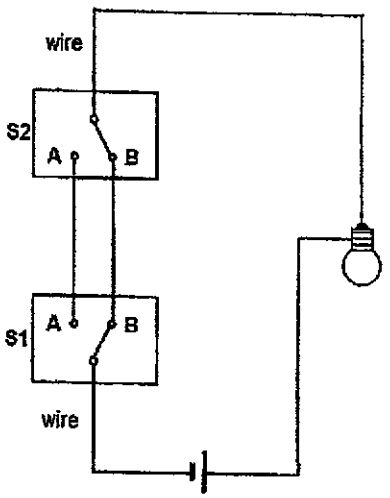
b) Food made by leaves cannot be transported to fruit X, so it was transported to fruit Y, making it grow bigger.

Q11. a) Metal, because it is a conductor of electricity.

b) It is magnetic.

c) When a large flow of electricity goes through the circuit, the iron bar is magnetised and becomes an electromagnet that can attract the latch. This causes the movable arm to disconnect from the contact point so electricity can flow through an open circuit.

Q12. a)



b) Change the arrangement of the bubs into a parallel arrangement.

c) B2 would not be affected.

END

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