Catholic High School (Primary)
Primary 4 Science 2021
Weighted Assessment 2

Name: _____ ( )

MARKS	30

Class: Pri. 4 - _____

Date: 20 August 2021 Parent's Signature: _____

Section A (10 × 2 marks)

For each question from 1 to 10, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Write the correct number in the brackets provided.

(20 marks)

1 Which is/are source(s) of light?

A sun
B star
C lamp
D moon

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

2 Which shadow could **not** be formed by the ceramic mug below?



(1) 

(2) 

(3) 

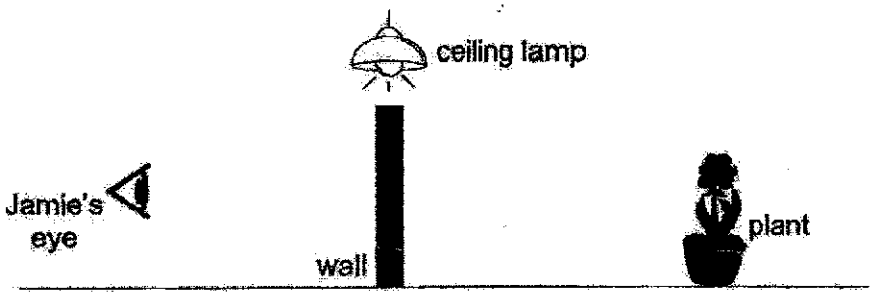
(4) 

( )

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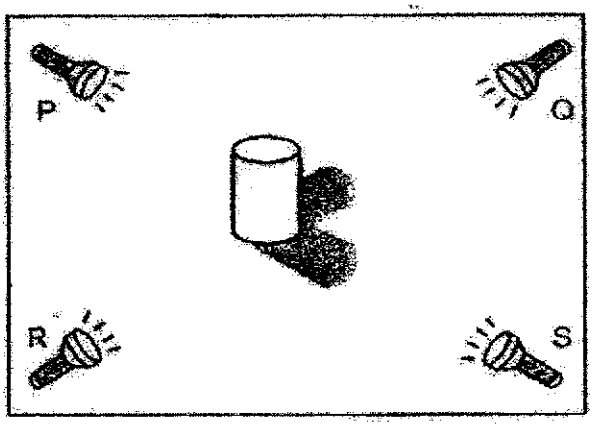
3 When Jamie stood behind the wall, she could not see her plant.



Which of the following explains why Jamie could **not** see her potted plant?

(1) The wall did not reflect light.
(2) The plant did not give off light.
(3) The wall did not allow light to pass through.
(4) The plant did not allow light to pass through. ( )

4 An object is placed at the centre with four torches.



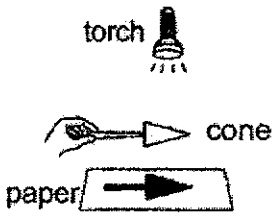
Which two torches are switched on to form the shadows shown in the diagram above?

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

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5 Study the diagram below.



What could you do to obtain a larger shadow of the cone on the paper?

A move torch towards cone

B move paper towards torch

C move cone away from paper

D move torch away from paper

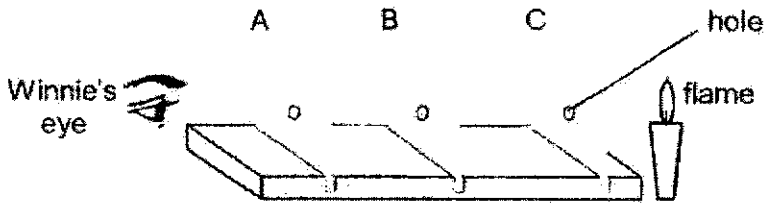
(1) A and B only

(2) A and C only

(3) B and D only

(4) C and D only ( )

6 Winnie was able to see the flame when she arranged the holes on the cardboards A, B and C in a straight line as shown below.



When she moved cardboard B to the left, Winnie could not see the flame.

Which of the following explains why Winnie could **not** see the flame?

(1) Light travels in straight lines.

(2) Light was reflected off Winnie's eye.

(3) Light was reflected off the cardboard.

(4) Light passed through the cardboards. ( )

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7 Which is/are source(s) of heat?

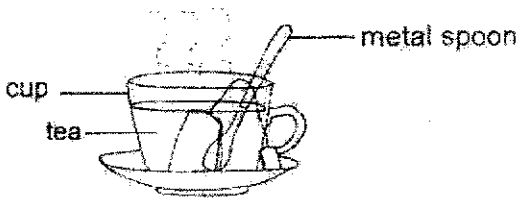
A fire
B sun
C mirror
D lighted bulb

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

8 Which statement about heat is correct?

(1) Heat has mass.
(2) Heat can be seen.
(3) Heat occupies space.
(4) Heat is a form of energy. ( )

9 Farah placed a metal spoon in her cup of hot tea. She then left her cup of hot tea on the table for five minutes as shown below.



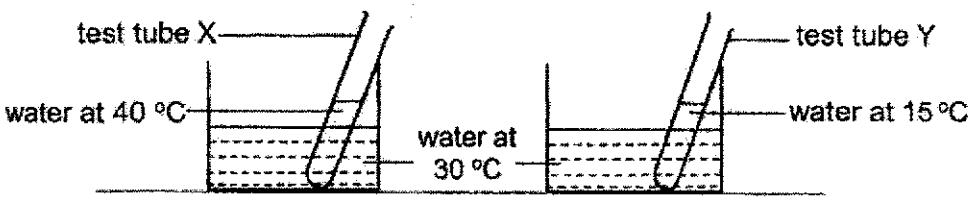
Which of the following describes what happened to the cup, tea and spoon during the five minutes?

	cup	tea	spoon
(1)	gained heat	gained heat	gained heat
(2)	gained heat	lost heat	gained heat
(3)	lost heat	lost heat	lost heat
(4)	lost heat	gained heat	lost heat

( )

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10 Ahmad placed two test tubes with water of different temperatures in basins of water as shown below.



What are the possible temperatures of the water in test tubes X and Y after ten minutes?

	Temperature of water in test tubes (°C)	
	X	Y
(1)	20	20
(2)	30	25
(3)	40	15
(4)	50	30

( )

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Section B (10 marks)

For questions 11 to 13, write your answers in this booklet.

The number of marks available is shown in brackets [ ] at the end of each question or part question. (10 marks)

11 Emily set up an experiment in a dark room as shown below. She wanted to find out how the number of sheets of paper affects the amount of light passing through.



She recorded the results in the table below.

Number of sheets of paper	Amount of light detected (unit)
0	100
1	81
2	44
3	2

(a) What is the relationship between the number of sheets of paper used and the amount of light detected? [1]

_____

_____

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SCORE / 1

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Continue from Question 11

Emily conducted another experiment by replacing the paper with materials P, Q, R and S to find out how much light could pass through each material.

The amount of light detected by the light sensor is shown in the table below.

Material	Amount of light detected (unit)
P	138
Q	0
R	24
S	476

Based on the results above, answer (b) and (c):

(b) what can Emily conclude about material S? [1]

_____

_____

(c) which material P, Q, R or S is most suitable to be used to make a door so that nobody can see through it? Explain your answer. [2]

_____

_____

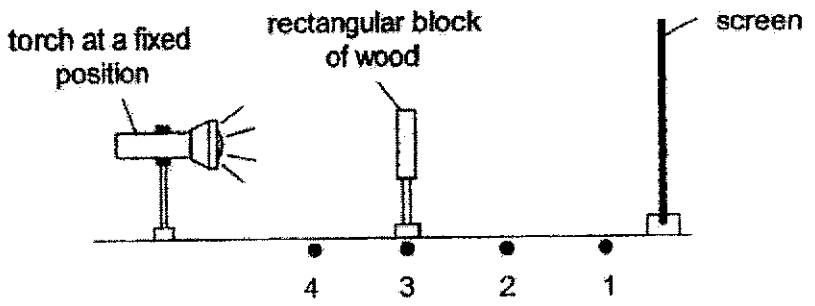
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12 Chen Hao placed a rectangular block of wood at different positions 1, 2, 3 and 4 as shown below.

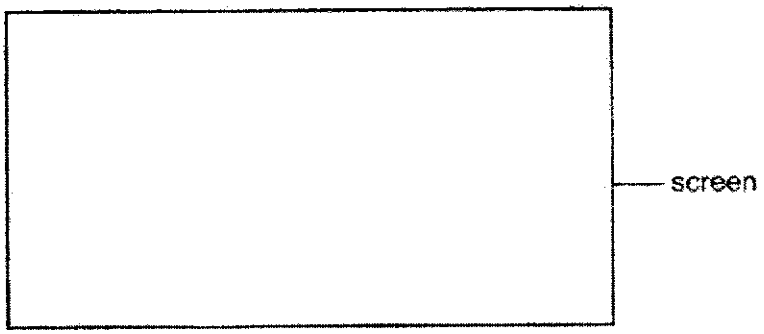


(a) A shadow of the block of wood was formed on the screen. How was the shadow formed? [1]

_____

_____

(b) Draw the shadow formed by the rectangular block of wood on the screen. [1]



(c) Chen Hao replaced the block of wood with a piece of tissue paper between the torch and the screen. Would there be a shadow formed? Give a reason for your answer. [1]

_____

_____

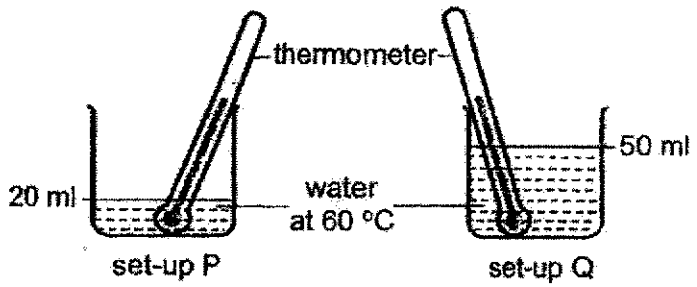
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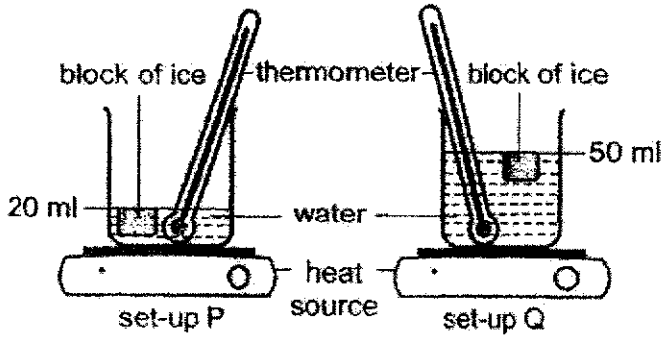
13 Devdas carried out an experiment as shown below to find out if different amount of water affects the amount of heat in it.



(a) Which variables were kept the same or changed throughout his experiment? Put a tick (✓) in the correct box. [2]

Variables	Kept the same	Changed
size of beaker		
amount of water		
type of thermometer		
temperature of water at the beginning of the experiment		

Next, Devdas heated up the water in set-ups P and Q until the water in both beakers reached 100 °C. He then removed the heat source and added identical blocks of ice into each beaker as shown below.



(b) In which set-up P or Q would the block of ice melt faster? Explain your answer. [1]

_____

_____

End of Paper

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SCHOOL : CATHOLIC HIGH SCHOOL
LEVEL : PRIMARY 4
SUBJECT : SCIENCE
TERM : WA 2

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	3	1	2	1	4	4	2	2
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28		

Q11

a) As the number of sheets of paper used increase, the amount of light detected decreases.
b) Material S, allows the most amount of light to pass through therefore materials is transparent.
c) Material Q. No light was detected by the light sensor.
Material Q did not allow any light to pass through.

Q12

a) Light from the toch was block by a rectangular block of wood that is why there is a shadow formed.



b)
c) Yes. The piece of tissue paper will block some light and cause a shadow to be formed on the screen.

Q13

Kept the same	Changed
✓	
	✓
✓	
✓	

b) Set-up Q. There is more water in Set-up Q thus there is more heat in it.

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