MARIS STELLA HIGH SCHOOL (PRIMARY)

NON-WEIGHTED ASSESSMENT

SCIENCE

1 NOV 2021

NAME: _____ ( )

CLASS: Primary 4 ( )

11 questions

25 marks

Total Time: 40 min

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

Total: _____ / 25

Parent's Signature: _____

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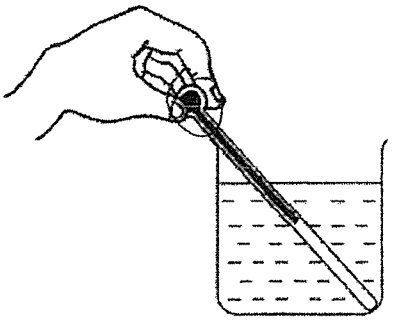
For questions 1 to 7, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4) and write your answer in the brackets provided. (14 marks)

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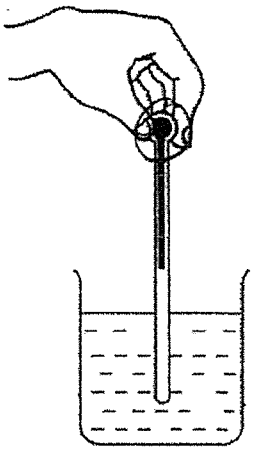
1 Jennifer wants to measure the temperature of hot water in a beaker.

Which one of the following diagrams shows the correct position of the thermometer when taking the temperature of the reading?

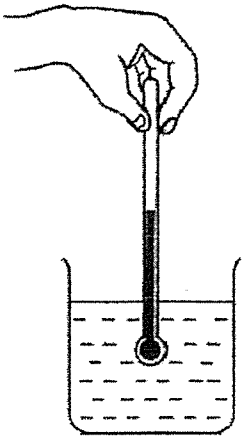
(1)



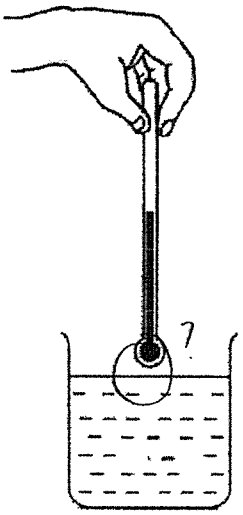
(2)



(3)



(4)



( )

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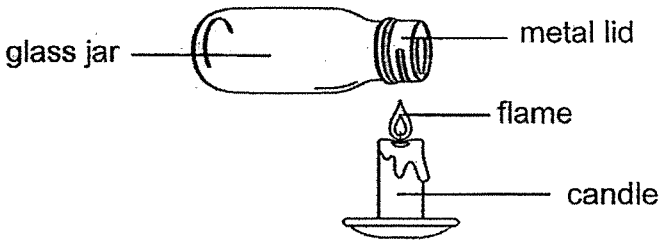
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2 Which of the following is the best conductor of heat?

(1) iron ball
(2) glass ball
(3) plastic ball
(4) rubber ball

( )

3 Elijah used the method below to open a glass jar with a tight metal lid.



Why was he able to open the lid easily after heating it for some time?

(1) Heat from the flame melted the metal lid.
(2) The metal lid gained heat from the flame and expanded.
(3) The glass jar gained heat from the flame and expanded.
(4) The glass jar lost heat from to the metal lid and contracted.

( )

4 Julia held on to some ice cubes.



Which one of the following best explains why her hands felt cold after a while?

(1) Julia's hands lost heat to the ice cubes.
(2) Julia's hands gained heat from the ice cubes.
(3) The ice cubes lost heat to the surrounding air.
(4) The ice cubes gained heat from the surrounding air.

( )

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5 Study the table below.

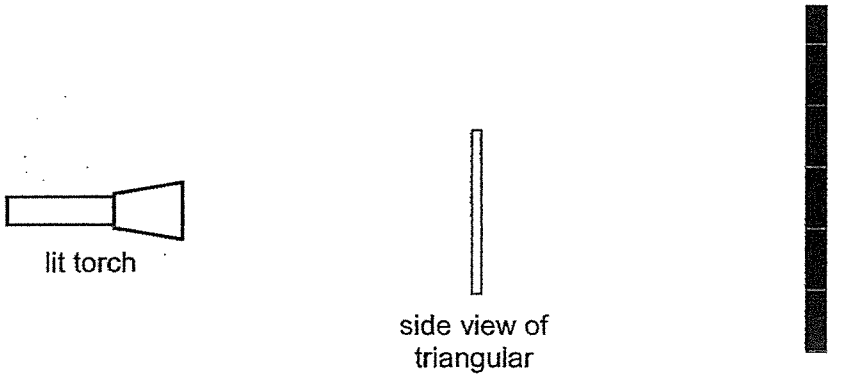
Light sources	Non-light sources
sun mirror lit candle	fire pencil cardboard

Which of the following items have been placed in the **wrong** group?

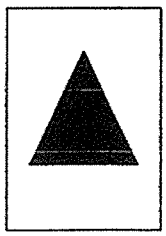
(1) mirror and fire
(2) cardboard and sun
(3) pencil and lit candle
(4) mirror and cardboard

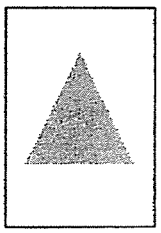
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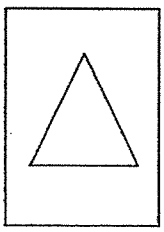
6 The set-up below shows light shining a triangular tracing paper.

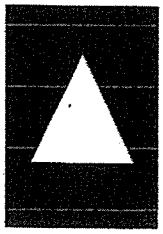


Which of the following will be observed on the screen?

(1) 
screen

(2) 
screen

(3) 
screen

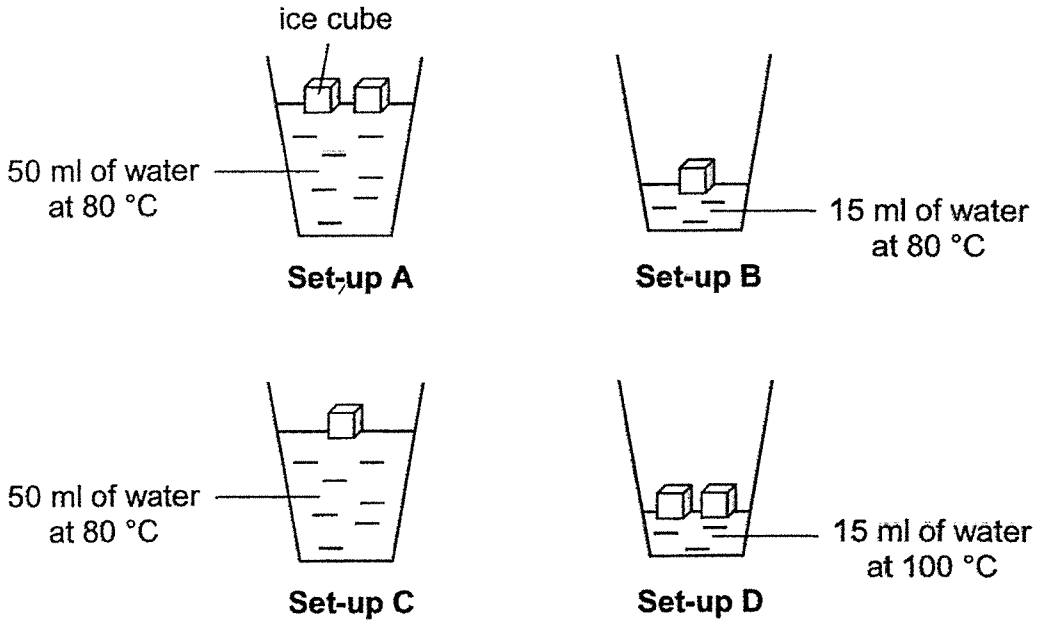
(4) 
screen

( )

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7 Josiah wanted to investigate if the amount of heat will affect the time taken for ice to melt. He prepared four set-ups, A, B, C and D, as shown below.



Which two set-ups can he use to conduct his experiment?

(1) A and B

(2) A and C

(3) B and C

(4) C and D

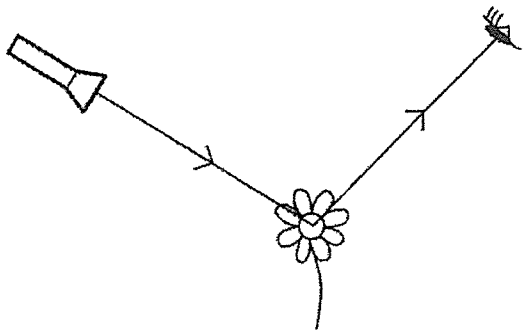
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For questions 8 to 11, write your answers in the space provided. The marks for each question is shown in the brackets [ ] at the end of each question. (11 marks)

8 The diagram shows how Michelle sees a flower.



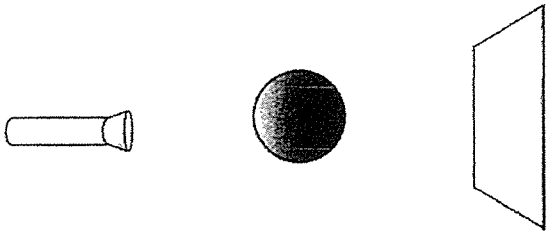
Fill in blanks **(a)** to **(c)** using the correct words in the box.

blocked	absorbed	source	reflected	shadow

(a) The torch is the light _____. [1]

(b) Light is _____ by the flower. [1]

Michelle then shines a torch on a ball and a shadow is formed on a smooth wall.



(c) A shadow is formed when light is _____ by an object. [1]

(d) Without shifting the torch, what could Michelle do to obtain a smaller shadow on the screen? [1]

_____

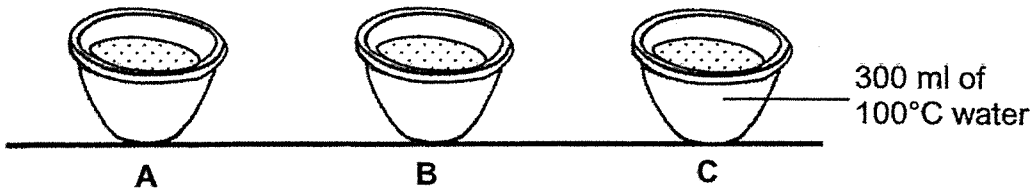
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9 Fred filled three cups, A, B and C, of different materials with 300 ml of boiling water. He placed them on the table as shown below.



After 20 minutes, he measured the temperature of water in each cup in the table below.

Cup	Temperature after 20 min (°C)
A	80
B	65
C	55

(a) Which cup, A, B or C, should Fred used to serve ice-cream such that the ice-cream will melt the slowest? [1]

_____

(b) Give a reason for your answer **(a)**. [1]

_____

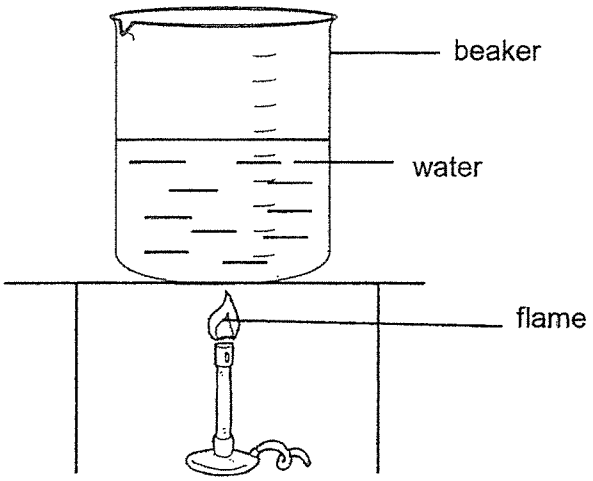
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	2

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10 Belinda placed a beaker of water above a flame as shown in the diagram below.



The flame is removed from the beaker of water.

(a) Circle the correct change of temperature of water in the beaker.

The temperature of the water in the beaker

(increased / decreased / remained the same) after some time. [1]

(b) Explain your answer in **(a)**. [1]

_____

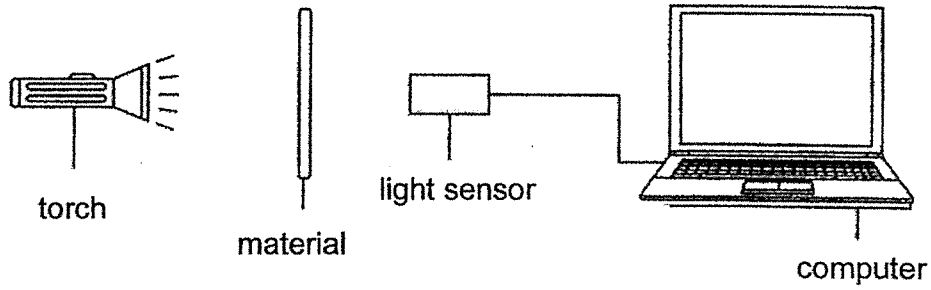
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	2

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11 Daryl conducted an experiment in a dark room. Materials D, E, F and G are each placed between a torch and a light sensor. The light sensor is used to record the amount of light that passes through each material.



The table below shows the readings recorded by the light sensor when each of the materials is placed in front of the same torch.

Material	Light intensity recorded (units)
D	3200
E	200
F	1900
G	850

(a) Which material, D, E, F or G, is most suitable to make a fish tank? Explain your answer. [2]

_____

_____

(b) State another variable that must be kept the same for the experiment to be fair. [1]

_____

_____

End of paper

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ANSWER KEY

YEAR : 2021
LEVEL : PRIMARY 4
SCHOOL : MARIS STELLA HIGH SCHOOL (PRIMARY)
SUBJECT : SCIENCE
TERM : NON WEIGHTED ASSESSMENT

Q1	3	Q2	1	Q3	2	Q4	1	Q5	1
Q6	2	Q7	3						

Q8	a)	The torch is the light source.
	b)	Light is reflected by the flower.
	c)	A shadow is formed when light is blocked by an object.
	d)	Move the ball closer to the screen.
Q9	a)	Cup A.
	b)	Cup A loses heat the slowest after 20 minutes, therefore it is the poorest conductor of heat and the ice cream will not melt easily.
Q10	a)	*Circle* 'decreased'
	b)	After the flame is removed from the beaker of water, the water loses heat to the cooler surrounding air and the air gains heat from the water. Therefore, the temperature of the water will decrease over time.
Q11	a)	Material D. It allows most light to pass through it amongst the others. Therefore, it allows the user to see the fish through the material.
	b)	The distance between the torch and the material must be kept the same.

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