Nan Hua Primary School
Primary 4 Science
Term 2 Weighted Assessment 2024

Marks	
Section A:	/10
Section B:	/10
Total:	**/20**

Name: _____ ( )

Class: Primary 4S_____

Date: _____

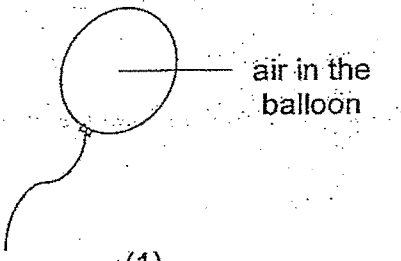
Duration: 30 minutes

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Parent's Signature

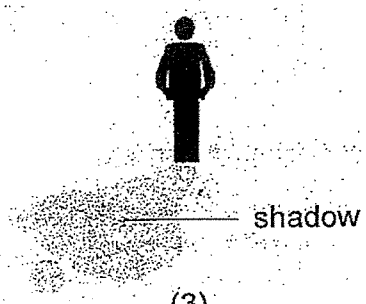
Answer all questions.

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 brackets provided.

1 Which one of the following is **not** matter?



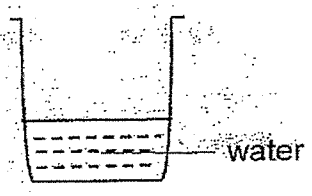
(1)



(3)



(2)



(4)

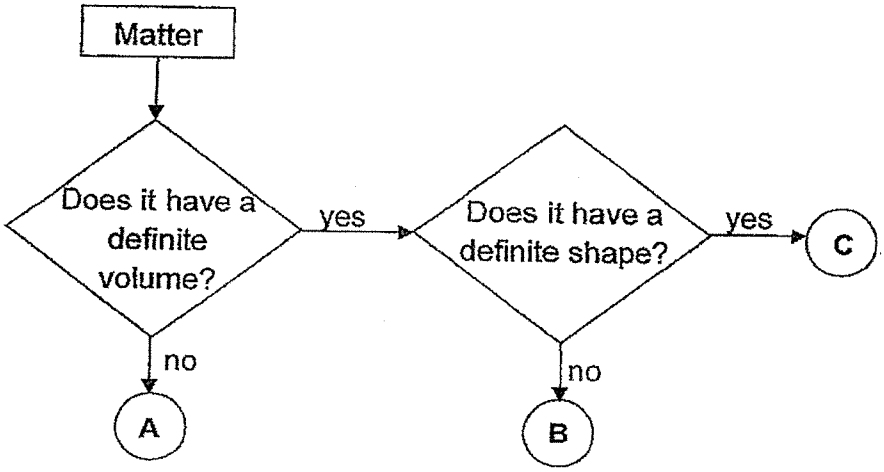
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2 Study the flow chart below.

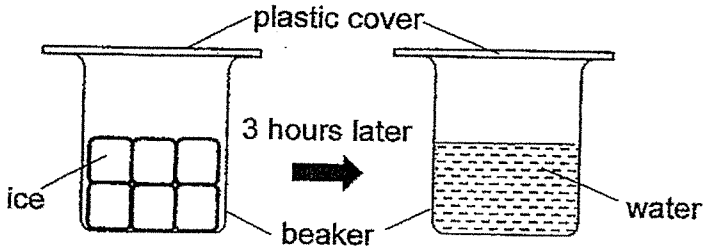


Which of the following represents A, B and C correctly?

	A	B	C
(1)	air	marble	water
(2)	air	water	coin
(3)	coin	water	air
(4)	marble	air	water

( )

3 Alice took some ice cubes from the freezer and put them into a beaker as shown below.



Which property/properties of the ice changed after 3 hours?

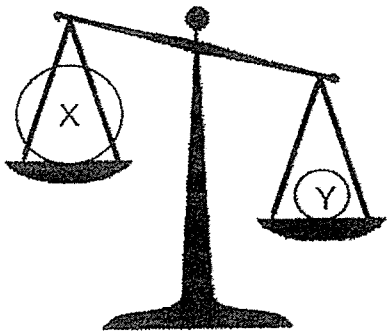
A mass
B state
C shape

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

( )

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4 Ben placed two round objects, X and Y, on a beam balance as shown below.



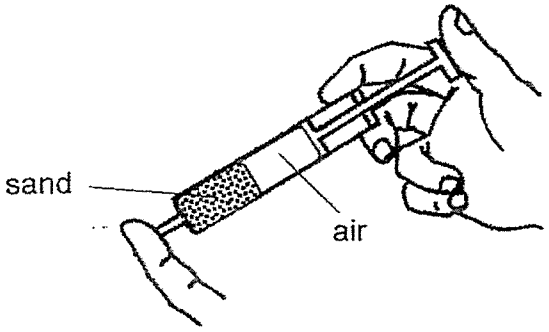
Based on his observation above, what conclusion could he make about the two objects?

A Object X has a greater mass than object Y.
B Object X occupied more space than object Y.
C Objects X and Y are made of different materials.

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

( )

5 A syringe is filled with an equal volume of air and sand. The nozzle of the syringe is covered tightly by a finger as shown below.



Which of the following is true when the plunger is pushed in?

	Volume of air	Volume of sand	Total mass of air and sand
(1)	decrease	decrease	decrease
(2)	decrease	no change	no change
(3)	decrease	no change	decrease
(4)	no change	no change	no change

( )

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Total score for Section A	/ 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 Weimin placed a metal ball into a container as shown in diagram 1. Next, he placed the ball on an electronic balance as shown in diagram 2.

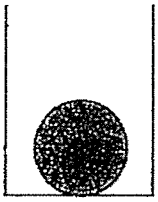


Diagram 1

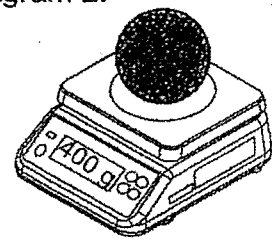


Diagram 2

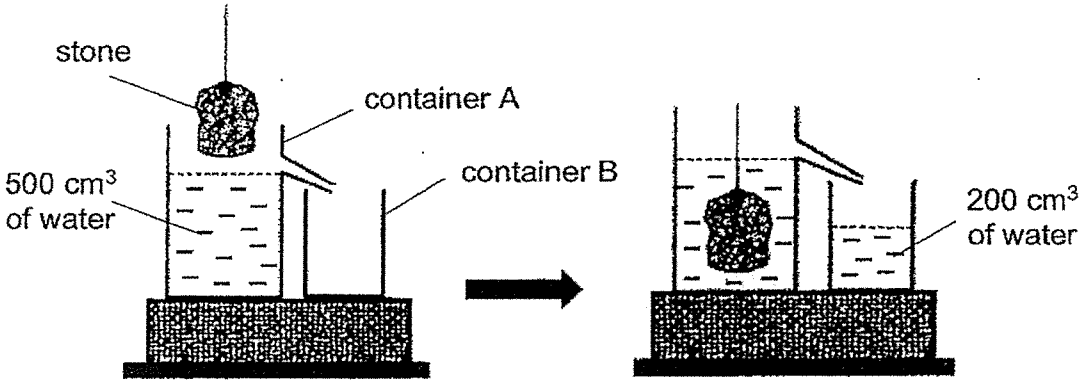
He observed that the metal ball did not take up the shape of the container as shown in diagram 1. He also observed that the ball has a mass of 400g as shown in diagram 2.

(a) Based on the observations above, state two properties of solids as shown by the metal ball. [1]

_____

_____

In another experiment, Weimin wanted to find out the volume of a stone as shown below.



At the start In the end

(b) What is the volume of the stone? [1]

_____

(c) Would Weimin be able to find the volume of the whole stone if he had only lowered part of the stone into the water? Give a reason for your answer. [1]

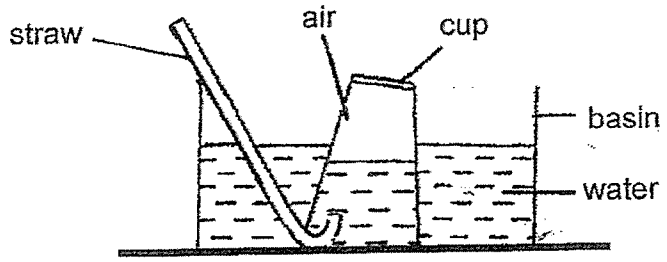
_____

_____

Score	
	3

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7 Mike set up an experiment as shown below. He used a straw to blow air into the inverted cup.



(a) When he blew air into the cup, the water level in the cup decreased and the water level in the basin increased. Explain why. [2]

_____

_____

_____

(b) Mike removed the straw from the experiment and made a hole at the bottom of the cup. Draw the new water level in the cup shown in the diagram below. [1]

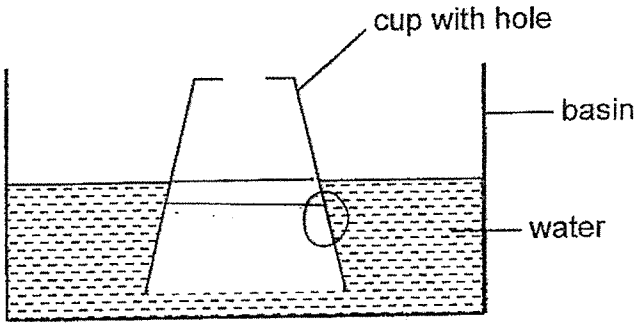


Diagram 2

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Score	3

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8 (a) Siti wanted to find out if objects of different materials of the same volume can have different masses.

(i) State a hypothesis for Siti's investigation. [1]

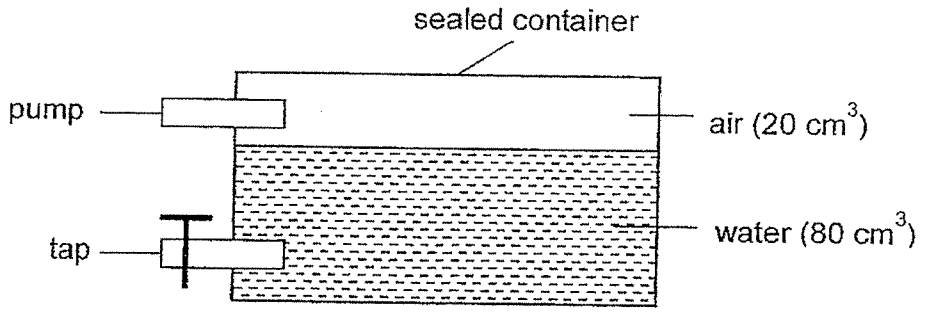
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_____

(ii) What is the variable to be measured in this experiment? [1]

_____

(b) Siti then conducted an experiment using the set-up as shown below.



She used the tap to remove 20cm^3 of water. She then used the pump to add 15 cm^3 of air into the container.

(i) What was the final volume of air in the container? [1]

_____

(ii) Which properties of water and air did you use to get your answer in **(b)(i)**? [1]

_____

_____

End of Paper

Score	
	4

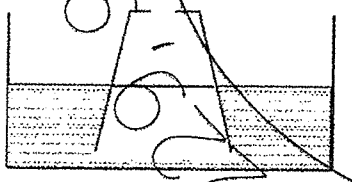
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P4 Science
Term 2 WA 2024
ANSWER KEY

Section A: (5 x 2 = 10 marks)

Qn	Answer
1	3
2	2
3	4
4	3
5	2

Section B: (10 marks)

6a	Solids have a definite shape. Solids have mass.
6b	200 cm^3
6c	No. If he lowered only part of the stone, the volume of water that flowed out/ displaced would only be part (lesser) of the volume of the stone and not the volume of the whole stone.
7a	The air entered the cup and occupied the space previously occupied by the water causing the water level in the cup to decrease. Water was pushed out of the basin and so the water level in the basin increased.
7b	
8a (i)	Objects made of different materials with the same volume have <u>different masses.</u> OR Objects made of different materials with the same volume have the <u>same mass</u>
8a (ii)	Mass of each object
8b (i)	40 cm^3
8b (ii)	Water has a definite volume. Air has no definite volume and occupies the remaining space of the container.

1

END

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