W2.4

Catholic High School (Primary)
Primary 5 Science 2024
Weighted Assessment 2

MARKS	30

Name: _____ ( )

Class: Pri. 5 - _____

Date: 8 May 2024 Parent's Signature: _____

Booklet 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 its correct number in the brackets provided. (20 marks)

1 Which statement is correct?

(1) All liquids boil at 100 °C.
(2) Evaporation takes place at any temperature.
(3) Water vapour can be seen with the naked eye.
(4) Evaporation takes place at any part of the liquid. ( )

2 The table shows the melting and boiling points of substance X.

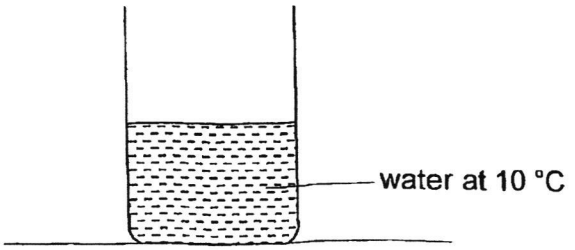
Substance	Melting point (°C)	Boiling point (°C)
X	25	125

At which state will substance X be at 10 °C and 100 °C respectively?

	State of substance X at	
	10°C	100°C
(1)	solid	liquid
(2)	liquid	liquid
(3)	liquid	gas
(4)	solid	gas

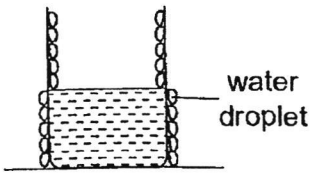
( )

3 A beaker of water at 10 °C was placed in a room at 30 °C.

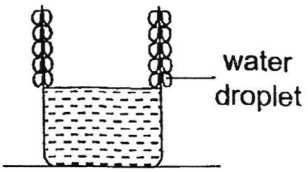


Which diagram correctly shows where the water droplets would form on the beaker?

(1)



(2)



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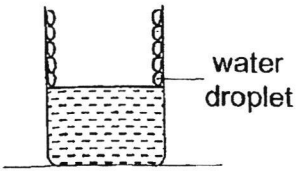

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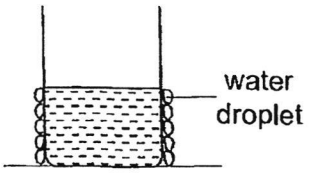
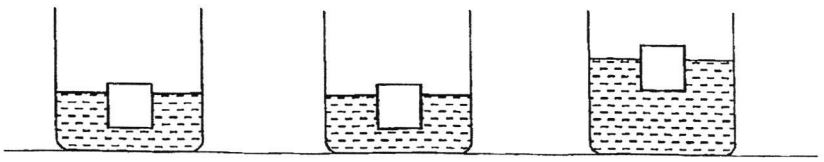


( )

4 Identical ice cubes were placed in identical cups containing water of different volumes and temperatures.



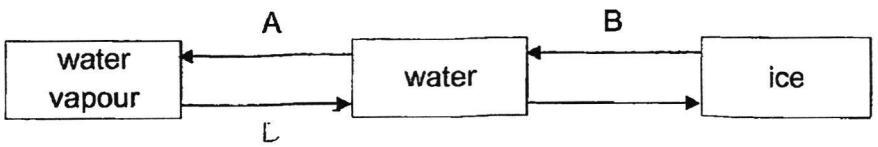
cup A	cup B	cup C
100 ml	100 ml	200 ml
60 °C	30 °C	60 °C

Which is the correct order when the ice cubes melt completely from the fastest to the slowest?

	Fastest →		Slowest
(1)	B	C	A
(2)	B	A	C
(3)	C	B	A
(4)	C	A	B

( )

5 A, B, C and D are processes involved in the changes of the states of water.



Which processes involve heat gain?

(1) A and B only

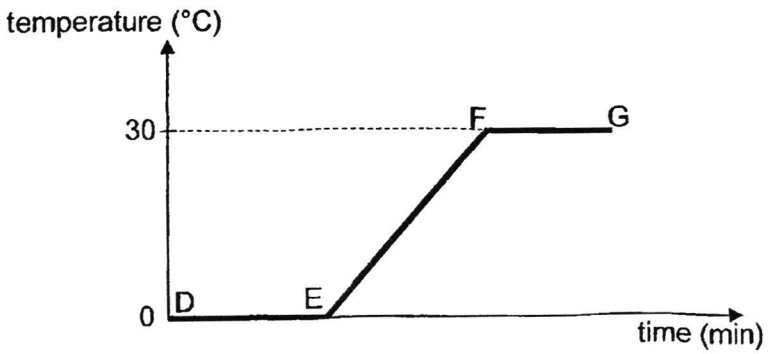
(2) A and D only

(3) B and C only

(4) C and D only ( )

6 A beaker of ice cubes was left in a room.

The graph shows the temperature of the ice cubes over a period of time.

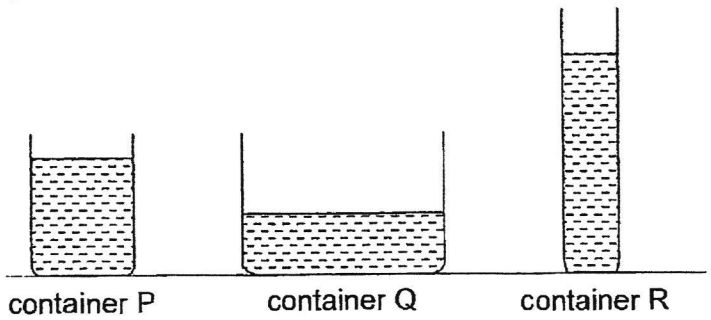


What processes do the lines DE and FG represent?

	DE	FG
(1)	melting	boiling
(2)	freezing	evaporation
(3)	melting	evaporation
(4)	freezing	boiling

( )

7 Jiayang wanted to investigate one of the factors affecting the rate of evaporation, using the set-ups shown.

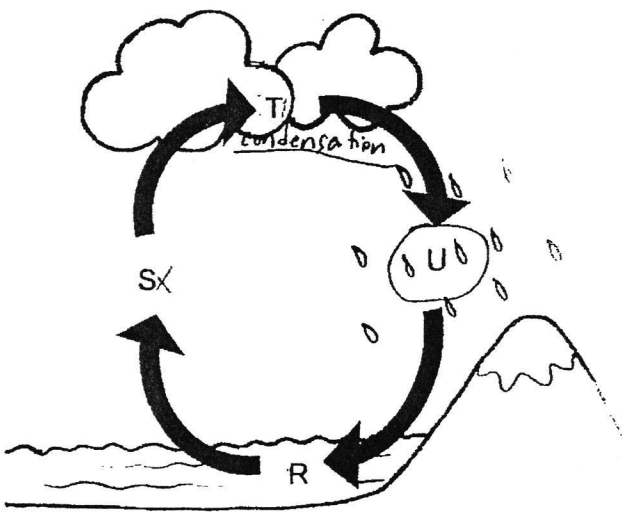


Which variables should Jiayang keep constant?

A size of beaker
B volume of water at the start
C volume of water left in the end

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

8 The diagram represents the water cycle. R, S, T and U represent different parts of the cycle.

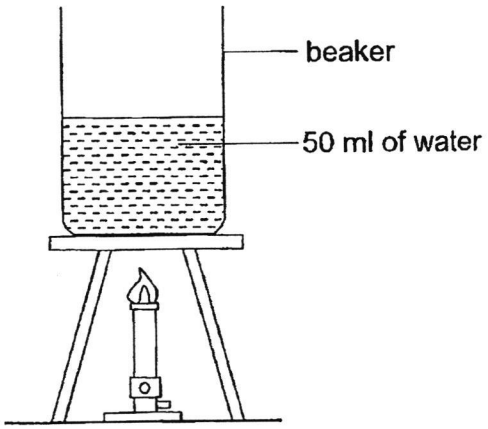


At which parts (R, S, T or U) are water present in the liquid state?

(1) R and U only
(2) R, T, and U only
(3) S, T, and U only
(4) R, S, T, and U ( )

9 Jayvier used the set-up shown. He used similar beakers made of different materials, A, B, C and D.

He heated each beaker and measured the time taken for the water to boil.



He recorded the results as shown.

Material	Time taken for the water to boil (min)
A	5
B	2
C	7
D	6

Which material should Jayvier use if he wanted to keep the water in the beaker hot for the longest period of time?

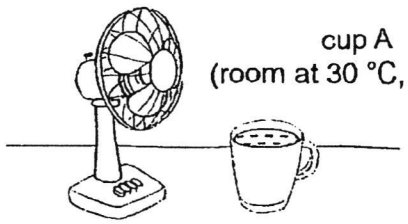
(1) A

(2) B

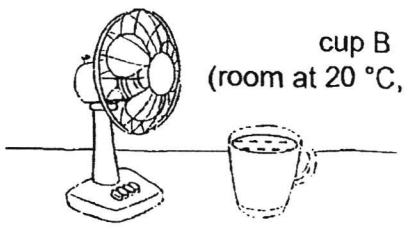
(3) C

(4) D ( )

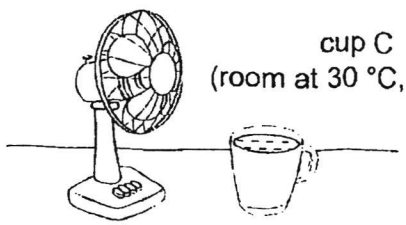
10 Mrs Wong filled three identical cups, A, B and C, with 300 ml of water each. She placed the cups in three rooms with identical fans.



cup A
(room at 30 °C, fan on)



cup B
(room at 20 °C, fan off)

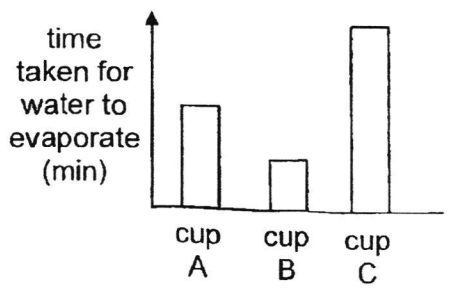


cup C
(room at 30 °C, fan off)

Mrs Wong measured the time taken for all the water to evaporate and recorded the information in a graph.

Which graph is correct?

(1)



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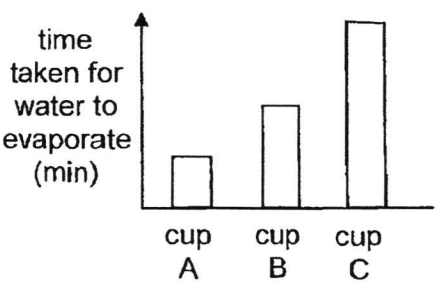

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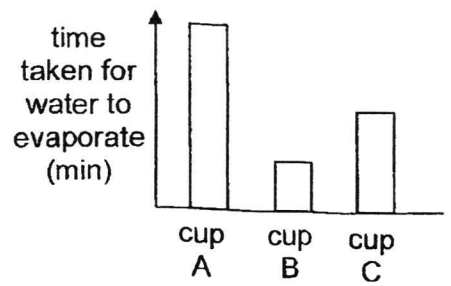

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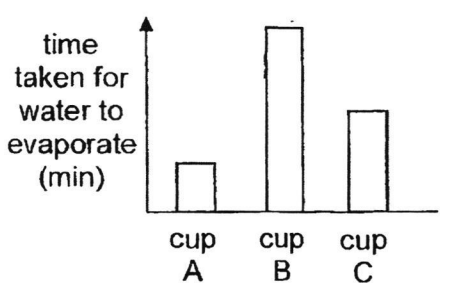


( )

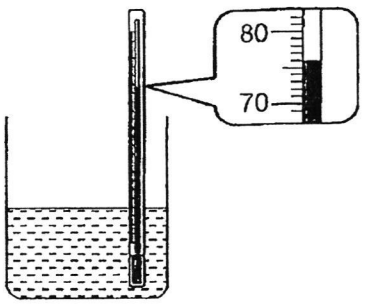
Booklet B (10 marks)

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

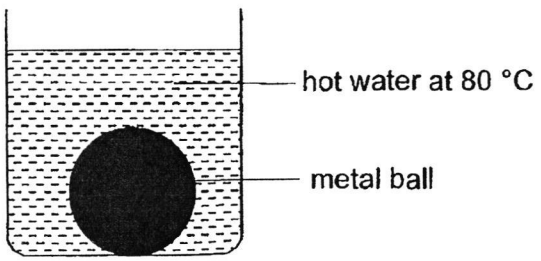
The number of marks available is shown in brackets [ ] at the end of each question or part question. (10 marks)

11 (a) State what temperature is. [1]

(b) State the temperature shown on the thermometer. [1]



A metal ball with a temperature of 20 °C was placed in a container of hot water as shown.



(c) State how the volume of the metal ball would change after five minutes. Explain why. [1]

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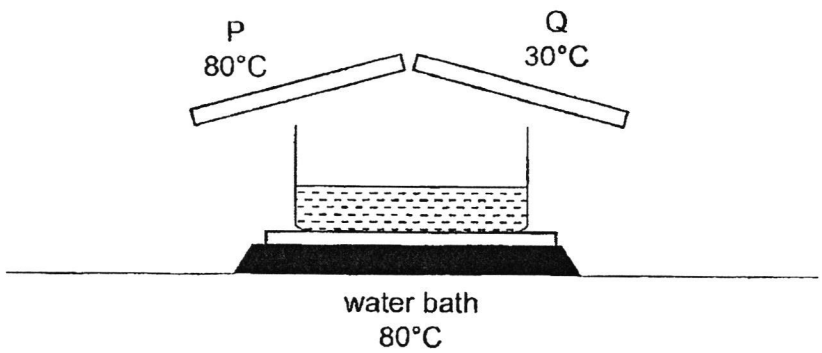
SCORE	3

12 A water bath was kept at a constant temperature of 80 °C. Two glass sheets of different temperatures, P and Q, were placed above the water bath as shown.



(a) State where the water droplets were formed within a short period of time. Put a tick (✓) against the correct statement. [1]

Statement	P	Q
Water droplets were formed on the upper side of the glass sheet.		
Water droplets were formed on the underside of the glass sheet.		
No water droplets were formed on the glass sheet.		

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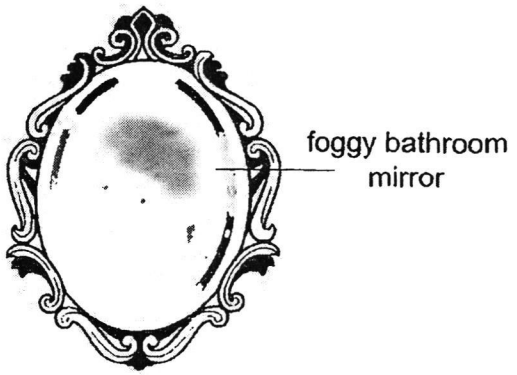
SCORE 1

Continue from question 12

Michael took a hot shower. When he came out of the shower, he observed that his bathroom mirror was foggy.



(b) Explain why Michael's bathroom mirror became foggy. [2]

Michael then replaced his bathroom mirror with a heated mirror. He observed that the heated mirror was not foggy after a hot shower.

(c) Explain why the heated mirror was not foggy after a hot shower. [1]

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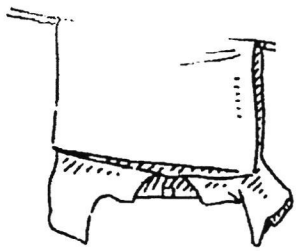
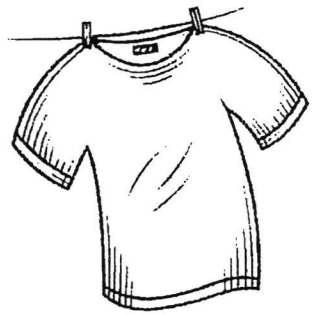
SCORE	/3

13 Shahir hung two similar shirts to dry in the same location. He hung shirt G folded and shirt H unfolded. Both were equally wet at the start.



hanging shirt G
(folded)



hanging shirt H
(unfolded)

(a) Based on the diagrams shown above, which shirt would dry first? Explain why. [2]

_____

_____

_____

(b) State one other factor affecting the rate of evaporation. [1]

_____

End of Paper

SCORE	3

SCHOOL : CATGOLIC HIGH SCHOOL
LEVEL : PRIMARY 5
SUBJECT : SCIENCE
TERM : 2024 WA2

CONTACT : CALL MR GAN @ 9299 8971,

Q1)	2
Q2)	1
Q3)	4
Q4)	4
Q5)	1
Q6)	3
Q7)	2
Q8)	2
Q9)	3
Q10)	4

Name: _____ ( ) Class: 5 Goodness

Primary 5 Weighted Assessment 2 Notes

<table>
<tr><th>Qn</th><th>Answer</th><th>Marks</th><th>Remarks</th></tr>
<tr><td>11</td><td>Concept: Definition of temperature, how heat is transferred, expansion/contraction based on heat gain/heat loss.</td><td></td><td></td></tr>
<tr><td>a</td><td>Temperature is a measurement of the degree of hotness of an object.</td><td>1</td><td>Please memorise the definitions from the textbook for the various topics. Good to prepare for the exams.</td></tr>
<tr><td>b</td><td>76 °C</td><td>1</td><td>Remember to write in the units. Will be penalised without units.</td></tr>
<tr><td>c</td><td>1. The <u>volume</u> of the metal ball increased.
2. The ball gained heat <u>from the hot water</u> and expanded.</td><td>1</td><td>Important:
Volume is the amount of space in an object.
Volume of metal does not equate to metal ball increased. Be precise.
Heat question – gain heat from (source)
Lose heat to (source)
No mention of heat flow = 0m</td></tr>
<tr><td>12</td><td>Concept: Changes of state of water, water cycle</td><td></td><td></td></tr>
<tr><td>a</td><td><table><tr><th>Statement</th><th>P</th><th>Q</th></tr><tr><td>Water droplets were formed on the upper side of the glass sheet.</td><td></td><td></td></tr><tr><td>Water droplets were formed on the underside of the glass sheet.</td><td></td><td>√</td></tr><tr><td>No water droplets were formed on the glass sheet.</td><td>√</td><td></td></tr></table></td><td>1
Half mark each</td><td>Remember the conditions for condensation.
Refer to Water and changes of state Activity sheets.
If there is no temperature difference, there will be no condensation.</td></tr>
</table>

b	1. *(source)*The warmer water vapour from the hot shower, 2. *(contact)* touched the cooler surface of the mirror, 3. *lost heat* and 4. *condensed* to form water droplets.	1	Please remember the steps and memorise if you cannot remember. Important type of question.
c	**Evidence:** The heated mirror was hotter than / same temperature as the water vapour from the shower, **Reasoning:** So the water vapour could not condense on the mirror.	1	State the process at the end of your answer. = condensation Does not occur as the question stem mentioned 'the heated mirror was not foggy'.
13	Concept: Factors affecting evaporation		
a	**C:** Shirt H **E:** Shirt H had a larger exposed surface area to the surroundings **R:** so the rate of evaporation was faster.	2	**Factors affecting evaporation:** **W – wind** **E – exposed surface area** **T – temperature** Always end of with the process = evaporation
b	Temperature / wind		Note: OTHER factors, thus, do not write 'exposed surface area'