

NS & TECH

Grade: 4

Year: 2016⁷

MEMO

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MODERATED
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G. Botes: 

QUESTION 1

Choose the correct word from those given and cross your answer in the box below:

1.1 Although living things look different, they all carry out seven similar life processes. One of the following is not part of the seven life process _____.

- A. Movement
- B. Sensing
- C. Shelter
- D. Feeding

A	B	C	D
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[1]

1.2 When growing yeast _____ water is used.

- A. Cold
- B. Boiling water
- C. Luke warm
- D. Frozen

A	B	C	D
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[1]

1.3 A _____ structure give support:

- A. Shell
- B. Frame
- C. Wall
- D. Basket

A	B	C	D
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[1]

1.4 A _____ shape does not change easily.

- A. Liquids
- B. Solids
- C. Gas
- D. None of the above

A	B	C	D
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[1]

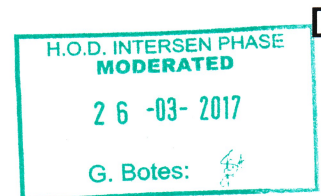
1.5 Which one of the following is not a property of glass?

- A. Waterproof
- B. Heat resistant
- C. Flexible
- D. Transparent

A	B	C	D
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[1]



QUESTION 2

State whether the following statements are true or false:

[5]

Statements	True / False
2.1. Freezing is the process when a liquid changes to a solid through cooling.	True ✓
2.2. Plants need light, water, air and soil to grow.	True ✓
2.3. Gases have no definite shape and take up all space available.	True ✓
2.4. When solid change to liquid the process is called condensing.	False ✓
2.5. Materials can be in three (3) states: e.g. Solid, Liquid and Gas.	True ✓

QUESTION 3

A. Name two objects that are flexible. (any two) ✓ ✓

Dish cloth, towel, newspaper, leather belt

[2]

B. Name one object that is waterproof. (any one) ✓

Glass jug, gum boots, plastic plate

[1]

C. Name two objects that are absorbent. (any two) ✓ ✓

Dish cloth, towel, newspaper.

[2]

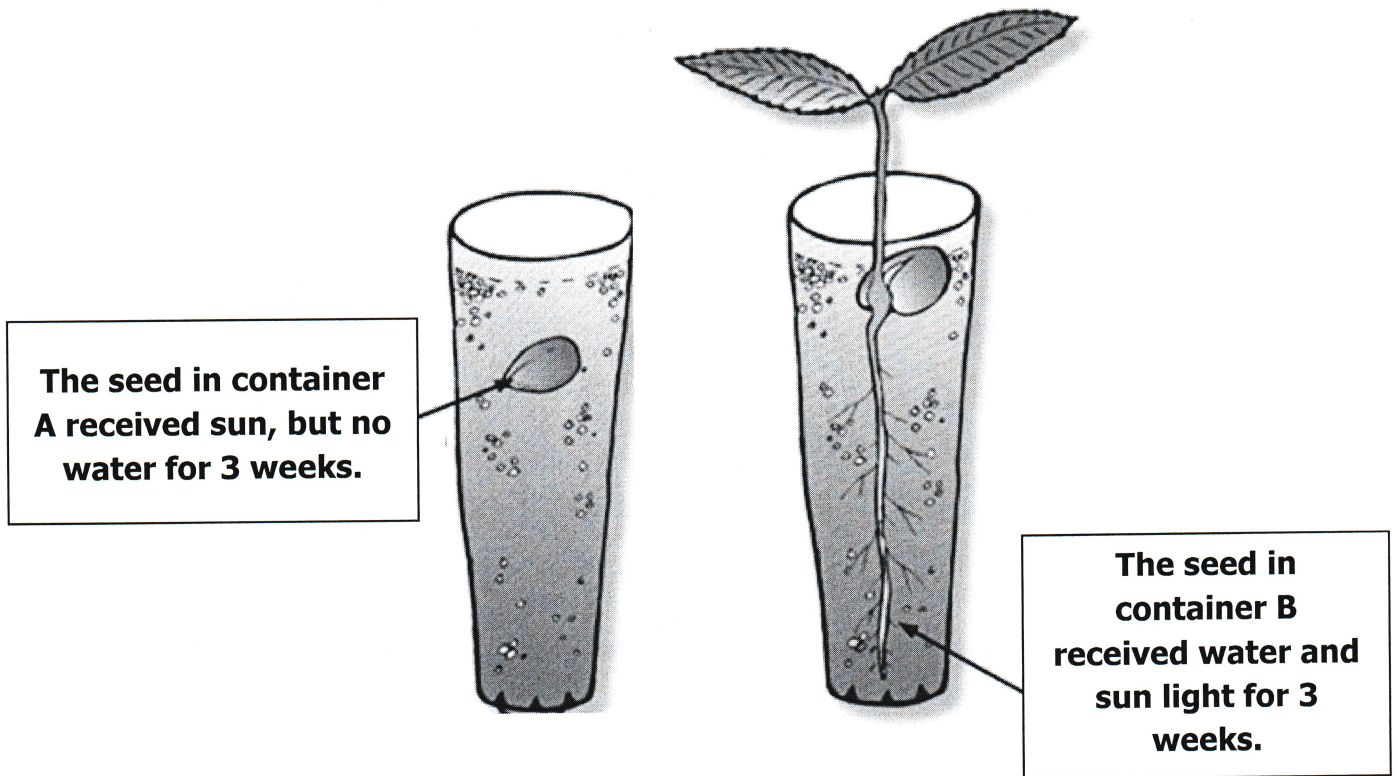
D. List two objects that are brittle. (any two) ✓ ✓

Glass jug, clay pot

[2]

QUESTION 4

Study the following pictures and answer the questions that follow:



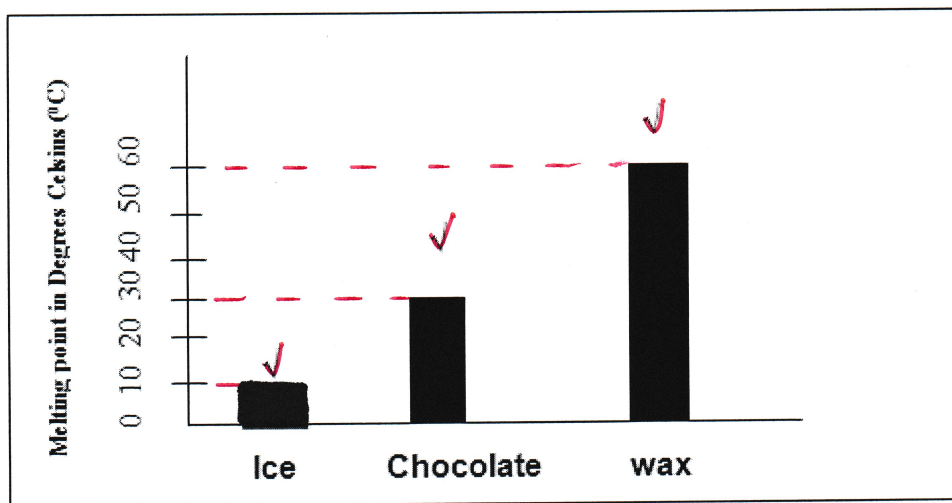
- 4.1 Explain what happened with container A's seed and why it never germinated.**
 Successful germination needs four (4) basic elements: Water, Sun, Soil and Air.
 Container A's seed only received three (3) of the four. It never received any water (moisture) so the seed was never revived. ✓ ✓ [2]
- 4.2 Explain what happened with container B's seed and why it germinated.**
 The seed in container B received Water (moisture), Sun, Air and it was placed in Soil - it had all four (4) necessary requirements to germinate. ✓ [2]

QUESTION 5

The table below shows the melting temperature of different substances.

Substance	Melting point in degrees Celsius ($^{\circ}\text{C}$)
Ice	10
Chocolate	30
Wax	60

5.1 Use the information listed in the table and draw a bar graph showing the different melting temperatures for these substances. [3]



5.2 Look at your graph and decide which substance melts at the lowest temperature. [1]
Ice will melt at the lowest temperature.

5.3 Look at your graph and decide which substance melts at the highest temperature.

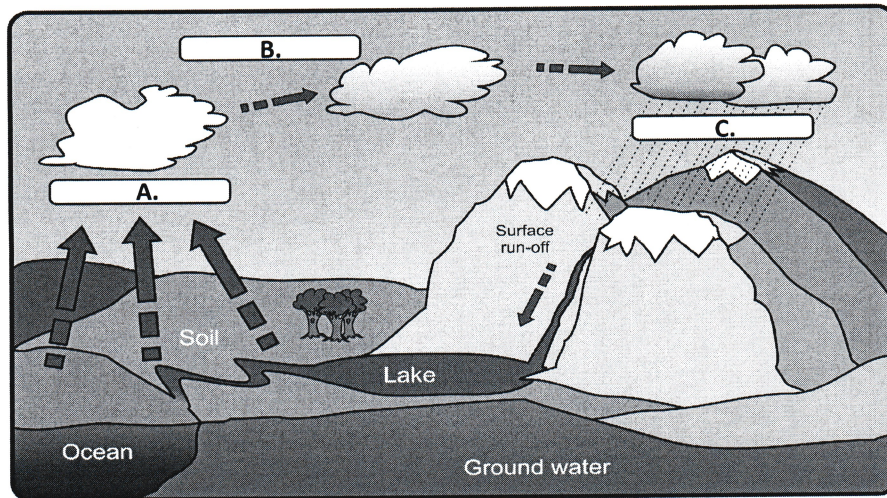
Wax will melt at the highest temperature. [1]

5.4 What is the name of the process when solid wax turns into a liquid?

The process is known as melting / liquefying or melt(s). [1]

QUESTION 6

6.1 Complete the water cycle by filling in the missing words.



A: Evaporation ✓

B: Condensation ✓

C: Precipitation (rain/snow/hail) ✓ [3]

6.2 Use the water cycle to explain in your own words how rain is formed.

Water as a liquid heats up through the sun and evaporates. As the evaporated water (water vapor) rises, it cools down through a process called condensation.

The condensed water vapor collects and form clouds through which precipitation (rain, snow or hail) then falls back to the earth. [4]

QUESTION 7

Study the following pictures and answer the questions that follow.

7.1 Which shape will loose its shape when you press on the corner?

The square / Figure A ✓

[1]

7.2 Suggest two ways how we can strengthen the shape? (any two)

Use one strip to brace diagonally opposite corners

Connect the opposite corners with each other by using a strut ✓

Through the use of triangulation ✓

Reinforce

[2]

7.3 Which shape do you think is the strongest and why? ✓

The triangle is the strongest, because: (any ONE reason of the three given) ✓

- all the "members" or struts will push into each other, in this way supporting each other.
- Triangulation is used to strengthen a triangle
- Strongest shape.

[2]

7.4 Draw on Figure A how you will reinforce the square. [1]

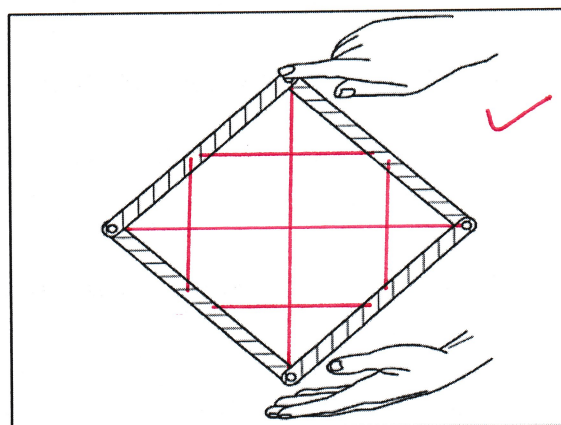


Figure A: Square shape

any answer.
As long as it
forms a triangle.

TOTAL: 40