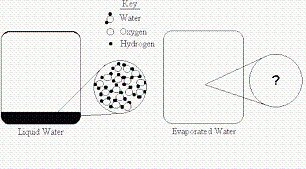
**Notes on Unit 2 & 3 Test, S1, 2013**

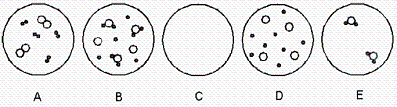
**Multiple Choice**

*Identify the choice that best completes the statement or answers the question.*

\_\_\_\_ 1. The circle on the left shows a magnified view of a very small portion of liquid water in a closed container.



What would the magnified view show after the water evaporates?



|  |  |  |  |
| --- | --- | --- | --- |
| a. | (a) | d. | (d) |
| b. | (b) | e. | (e) |
| c. | (c) |

For the next two questions refer to the following:

The evening before a birthday party, you fill several balloons with helium gas.

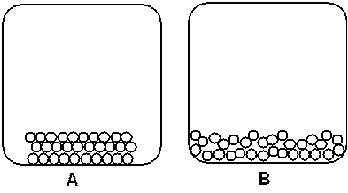


The birthday party occurs on a hot summer day.

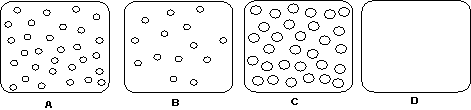
\_\_\_\_ 2. The next day (the same hot temperature) the latex balloons are noticeably smaller. Which of the following explains this observation?

|  |  |
| --- | --- |
| a. | Some of the helium particles escaped through pores in the latex. |
| b. | The helium particles became smaller than before. |
| c. | The helium particles lost their strength. |
| d. | The particles moved closer to each other. |

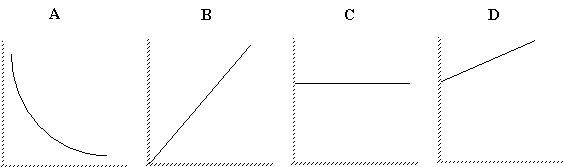
The diagram below shows two sealed containers, each containing 25 g of a substance. The circles represent particles of matter magnified large enough to be seen.



\_\_\_\_ 3. The substance in the previous question was allowed to evaporate completely to a gas. Which of the diagrams below best represents the contents of the sealed container?



|  |  |  |  |
| --- | --- | --- | --- |
| a. | A | d. | D |
| b. | B | e. | None of the above answers are correct. |
| c. | C |



\_\_\_\_ 4. Which graph represents the relationship between the pressure of a gas and its volume?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | A | c. | C |
| b. | B | d. | D |

\_\_\_\_ 5. You decide to boil water to cook noodles. You place the pan of water on the stove and turn on the burner. How does the behavior of the water molecules change as the pan of water is heated?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | the molecules speed up. | d. | the density of the water increases. |
| b. | the molecules speed up and expand. | e. | All answers are correct. |
| c. | the molecules speed up and contract. |

\_\_\_\_ 6. Which would feel warmer to the touch and which of these contains more heat energy: a bucket of water at 50°C or a bathtub filled with water at 25°C?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | the bathtub feels warmer than the bucket and has more heat energy than the bucket. | d. | the bathtub feels colder than the bucket and has more heat energy than the bucket. |
| b. | the bathtub feels warmer than the bucket and has less heat energy than the bucket. | e. | All answers are incorrect. |
| c. | the bathtub feels colder than the bucket and has less heat energy than the bucket . |

The graph at right represents the temperature time behavior of what was initially a sample of ice at 0°C.

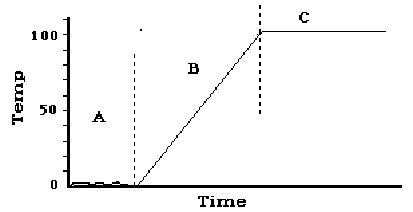
Use the following choices for questions \_\_\_ – \_\_\_

**A. increasing**

**B. decreasing**

**C. the same**

**D. zero**

****

\_\_\_\_ 7. During region A the phase energy is .

|  |  |  |  |
| --- | --- | --- | --- |
| a. | A | c. | C |
| b. | B | d. | D |

\_\_\_\_ 8. During region B of the graph on the previous page the energy being absorbed is

|  |  |  |  |
| --- | --- | --- | --- |
| a. | increasing the velocity of the water molecules | c. | increasing the distance between the water molecules and increasing their phase energy. |
| b. | increasing the distance between the water molecules and reducing their phase energy. | d. | decreasing the velocity of the water molecules |

\_\_\_\_ 9. When gaseous water condenses to liquid water

|  |  |  |  |
| --- | --- | --- | --- |
| a. | particles of hydrogen and oxygen recombine to form H2O. | c. | the water releases energy to the surroundings. |
| **b.** | **the water particles are arranged in an orderly pattern.** | **d.** | **the water absorbs energy from the surroundings** |