Honors Chemistry Quiz/Test over Liquids, Solids and Thermochemistry

Quiz includes items 1-24. Test includes all items.

All of this information is in the notes packets, and the powerpoint notes, or in the class recordings. Most of this information is also in your textbook.

Students should be able to:

1. Name the three types of IMFs and tell how each is formed.
2. Explain how IMFs play a role in determining the state of matter.
3. Compare and contrast the three types of IMFs.
4. Compare and contrast the properties of solids, liquids and gases.
5. Define the relationship between Kelvin temperature and average kinetic energy.
6. Define heat and know that the unit for measuring heat is the joule.
7. Convert joules to kilojoules.
8. Convert joules to calories.
9. Explain that heat is converted to potential or kinetic energy.
10. Define potential energy and explain what happens to a substance if it has a change (increase or decrease) in potential energy.
11. Define kinetic energy and explain what happens to a substance if it has a change (increase or decrease) in kinetic energy.
12. Describe what makes an amorphous solid different from other solids. Give an example of an amorphous solid.
13. Explain how allotropes of an element are different. Give an example of an element that has allotropic forms.
14. Name and explain the six types of phase changes. Give an example of each.
15. What are the two types of vaporization? How are they alike? How are they different?
16. Explain how evaporation cools the body.
17. Explain what is meant by normal atmospheric pressure, normal boiling point, and normal melting/freezing point.
18. Explain how atmospheric pressure affects boiling point (vacuum evaporator and pressure cooker).
19. Interpret and use heating and cooling curves.
20. Define specific heat. Give the specific heat of liquid water in units of J/gºC and in cal/gºC.
21. Explain how a “heat” calorie is related to a “food” calorie.
22. Understand the relationship between specific heat and temperature change. (The higher a substance’s specific heat, the more resistant the substance is to changes in temperature.)
23. Define heat of fusion and heat of vaporization.
24. Draw heating and cooling curves and **solve for the amount of heat absorbed or released by a substance over a period of constant heating or cooling**.
25. Understand that heat is transferred from a substance with a higher temperature to a substance with a lower temperature. **Solve problems involving the transfer of heat from one substance to another**.
26. Explain how a calorimeter can be used to help with heat calculations. How can one make a simple calorimeter?
27. Explain the difference between an endothermic reaction and an exothermic reaction.
28. Use + and – signs to indicate whether an amount of energy is absorbed or released by a reaction. Write and interpret thermochemical equations.
29. Use the heat of reaction to **calculate the amount of heat absorbed or released when a certain amount of reactant is used or certain amount of product is formed**.
30. Solve for heat of reaction using heats of formation and Hess’s Law.