

Unit 3 Study Guide

- 1) What is the difference between heat and temperature?
- 2) What some different types of energy?
- 3) What do we call the change in energy?
- 4) What does the term "thermodynamics" mean?
- 5) What are the three types of energy "accounts" we will see in this course?
- 6) What causes the phase energy, and what does it cause the phase energy to do when it is higher?
- 7) What are the three ways that energy can be transferred?
- 8) What are the three main points of the KMT?
- 9) When substances are changing phase, which type of energy account is affected?
- 10) How can you tell on a heating curve when the phase is changing?
- 11) When a substance is changing its temperature, what energy account is changing there?
- 12) What do the regions on an energy curve look like when the temperature is changing?
- 13) Which account does the phase energy account always have to give energy to or take from?
- 14) How many energy bars do we associate with each phase?
- 15) What two things are important to know when energy goes into a system that is not changing phase and its temperature is changing? Explain what they are? Write the equation.
- 16) What do we call a system that is releasing energy?
- 17) What do we call a system that is absorbing energy?
- 18) What two things do you need to know when a system is freezing? Explain what they are? Write the equation.
- 19) What two things do you need to know when a system is melting? Explain what they are? Write the equation.
- 20) What two things do you need to know when a system is boiling? Explain what they are? Write the equation.
- 21) What two things do you need to know when a system is condensing? Explain what they are? Write the equation.
- 22) Which of the previous 4 processes are exothermic?
- 23) Which of the previous 4 processes are endothermic?
- 24) Explain the process of hot water causing a cool piece of copper to get warmer. Draw particle diagrams of just when the copper is put in, and when the copper has been in the water for a while. Explain which will change its temperature more and how you know. Whose temperature will go up, and whose will go down.
- 25) Explain the process of a really hot piece of copper being put into 99°C water causing the water to boil. What will happen to the temperature of the two objects? Draw particle diagrams.