

Study Guide –Chapter 3

CHM1033. Summer 2020

Test # 1: Jun. 17th (Chapters 3 and 4)

1. Which of the following is a homogeneous mixture?
 - A. a cup of hot tea
 - B. tea with ice and water
 - C. vegetable soup
 - D. chocolate chip ice cream
2. Which of the following is an example of a chemical change?
 - A. Snow melts to form liquid water.
 - B. Dry ice (CO₂) vaporizes.
 - C. Rust forms on a car.
 - D. A chocolate bar melts.
3. While overseas, your friend gets sick and has a temperature of 38.5 °C. What is this in degrees Fahrenheit?
4. Which of the following is a pure substance?
 - A. sugar (C₁₂H₂₂O₁₁)
 - B. soft drink
 - C. sea water
 - D. milk
5. A patient with heat stroke has a temperature of 106.0 °F. What does this read on a Celsius thermometer?
6. Which of the following cannot be described as a physical change?
 - A. meat cooks on a grill
 - B. sugar is dissolved in water

- C. ice melts
 - D. water evaporates
7. A layer of copper on a pan has a mass of 135 g. How much heat, in kilojoules, will raise the temperature of the copper from 26 °C to 328 °C if the specific heat of copper is 0.385 J/g °C?
8. How many kJ are needed to raise the temperature of 325 g of water from 15.0 °C to 77.0 °C? (Specific heat of water is 4.184 J/g °C)

ANSWERS

1. A
2. C
3. 101.3 °F
4. A
5. 41.1 °C
6. A
7. 15.7 kJ
8. 84.3 kJ