

## Chapter 2

### Answers to Questions

1. (a) weight is a result of gravitational attraction and mass is a measure of the quantity of matter in a substance;  
(b) melting is the phase change from solid to liquid and sublimation is the phase change directly from solid to gas.
2. (a) boiling is the liquid to gas phase change which happens at the boiling temperature of that particular substance and evaporation is the slower process of vaporization below the boiling temperature;  
(b) a homogenous mixture (also called a solution) has a uniform composition but has properties between those of its constituent components and a heterogeneous mixture does not have uniform composition.
3. A sol consists of a solid phase dispersed in a liquid phase and a gel is a liquid phase dispersed in a solid phase.
4. A foam is a gas dispersed in a liquid and an emulsion is a liquid phase dispersed in a liquid phase.
5. (a) viscosity; (b) crystal.
6. (a) filtration; (b) distillation.
7. (a) physical; (b) chemical; (c) physical.
8. (a) chemical; (b) physical; (c) chemical.
9. Write the name (correctly spelled) of the element corresponding to each of the following symbols:  
(a) sodium                      (b) nitrogen                      (c) neon
10. Write the name (correctly spelled) of the element corresponding to each of the following symbols:  
(a) hydrogen                      (b) helium                      (c) mercury
11. Write the symbol of the element corresponding to each of the following names:  
(a) C                      (b) Ca                      (c) Cu

12. Write the symbol of the element corresponding to each of the following names:  
(a) K            (b) Pb            (c) Fe
13. At least two elements start with the same two letters of “Ch” – chlorine and chromium. For this reason, the first and third letters of the name have to be used.
14. At least two elements start with the same two letters of “Ma” – magnesium and manganese. For this reason, the first and third letters of the name have to be used.
15. “Co” cannot be used for copper as Co is used for cobalt;  
“Ir” cannot be used for iron as it is used for iridium;  
“Si” cannot be used for silver as it is used for silicon;  
“Ti” cannot be used for tin as it is used for titanium.
16. The three elements are krypton, Kr; vanadium, V; and xenon, Xe (also, uranium, U, is the only real name of an element using the letter U, as the element names using “Uu” and one other letter at the end of the tables are only temporary names).