

CHEMISTRY CYCLE 1 REMEDIAL ASSIGNMENT

GENERAL/NATURE OF SCIENCE

- 1) Provide real examples of a scientific theory and a scientific law.
- 2) Contrast experimental group and control group.
- 3) What variable is the x-axis called on a graph? What variable is the y-axis called on a graph?
- 4) Contrast direct and indirect observations. Give an example of each.
- 5) State the Law of Conservation of Mass.
- 6) State the Law of Conservation of Energy.

SCIENTIFIC MEASUREMENT

- 7) What are significant figures, and why are they used in scientific measurements?
- 8) List the names of the metric prefixes symbolized by K H D U D C M and list the numerical values for each.
- 9) List steps how to do DA (dimensional analysis).
- 10) What is a conversion factor? Give an example.
- 11) Explain how to find the number of grams in one mole of a substance.
- 12) How many liters are found in one mole of gas under STP conditions?
- 13) How many particles (atoms etc.) are in one mole of a substance?
- 14) Define density, and give an example of a common unit of density.
- 15) What is mass? Give an example of a common unit of mass.
- 16) What is volume? Give an example of a common unit of volume.
- 17) How does scientific notation work?

STATES OF MATTER

- 18) Give an example (name or chemical formula) of a real element that exists. Give an example (name or chemical formula) of a real compound that exists.
- 19) Give an example of a homogeneous mixture. Give an example of a heterogeneous mixture.
- 20) Is freezing water a chemical or physical change? Why?
- 21) Is rotting of fruit a chemical or physical change? Why?
- 22) Is dissolving salt in water a chemical or physical change? Why?
- 23) List two ways to separate a mixture.

ATOMIC STRUCTURE

- 24) What is the charge of a proton? What is a charge of an electron?
- 25) Briefly summarize the controversy in ancient Greece about atoms.
- 26) Summarize Dalton's Atomic Theory.
- 27) What is a CRT?
- 28) Explain the "APE" acronym.
- 29) Explain the "MAN" acronym.
- 30) Define isotopes.