SNC1DI Chemistry Unit Review

These are the topics we have covered and you should know for the test:

- The laws of the particle theory of matter & CHANGE OF STATE
- The difference between **physical** and **chemical properties** AND physical and chemical **changes**
- The difference between pure substances, solutions, and mixtures
- The names of the chemical families (group 1: alkali metals, group 2: alkaline earth metals, group 7/17: halogens, group 8/18: noble gases, and the transition metals)
- History of the Atom
- Structure of the atom: Protons and neutrons are in the nucleus and electrons are orbiting around the nucleus within specific energy levels.
- Atomic Number and Atomic Mass (Mass Number), periodic & standard atomic notation
- How to determine the number of protons, neutrons and electrons in a neutral atom.
- Valence Electrons & Orbitals (energy levels): 1^{st} shell = max. 2 electrons, 2^{nd} shell = max. 8 electrons, 3^{rd} shell = max. 8 electrons
- Bohr-Rutherford Diagrams
- Counting Atoms
- Gas Tests

Sample Problems:

1)State 3 things that Li & K have in common

2)Draw a Bohr-Rutherford diagram of calcium

3)Count the number of each atom and the total number of atoms in 5 $Ca_3(PO_4)_2$

4)If a glowing splint re-ignites, what gas is likely present?

5)What are 3 physical properties of a metal?

6)What is the standard atomic notation of sodium? How is this different than periodic notation?

7)Who was responsible for the discovery of the electron? The proton? The neutron? Electron orbits?

Now do the self-quiz on p. 294 - 295