Chem 11 final review #5 Atomic theory /Enthalpy

1. How many protons, neutrons and electron in:
   1. An oxygen-16 atom
   2. An oxygen-19 ion
   3. A calcium-40 ion
   4. A calcium-42 atom
2. What is the electron configuration for the following atoms/ions
   1. Nitride ion
   2. Strontium atom
   3. Magnesium ion
   4. Barium atom
3. Draw and describe the Dalton, Thomson, Rutherford, and Bohr models of the atom.
4. Briefly explain how Thomson’s experiment helped him create his model of the atom.
5. Briefly explain how Rutherford’s experiment helped him create his model of the atom.
6. Briefly explain how the Bohr model explains how we see colours.
7. Draw a labeled reaction diagram for the reaction and state if exo or endothermic.

2H2 + O2 🡪 2H2O ∆H = - 243