

Bauck's CHEMISTRY Ch. 3 and 23 Test Review
This is an optional assignment due the day of the test.

Materials: loose leaf paper, pen or pencil, calculator

Test date: _____

Test value: 200 points

Test format:

multiple choice

chart questions (prac. 1-2): protons, neutrons, electrons, atomic number, mass number

short answers

math problems (from past chapters/units) – mole math

Topics:

- 1) **Alpha particle (α ; ${}^4_2\text{He}$)**—What is it? How is it formed? Contrast with beta and gamma. Know the symbols α and ${}^4_2\text{He}$ as designations for alpha.
- 2) **Aristotle**—What was his role in the early ideas of atoms?
- 3) **Atomic mass**—What is it? Contrast with **mass number**.
- 4) **Atomic neutrality**—What is it?
- 5) **Atomic number**—What is it? How do you find it on the periodic table?
- 6) **Beta particle (β , ${}^0_{-1}\text{e}$)**—What is it? How is it formed? Know the symbols β and ${}^0_{-1}\text{e}$ as designations for beta.
- 7) **Cathode rays**—What do these contain?
- 8) **CRT**—What is it?
- 9) **Dalton's atomic theory**—What are the main points? (See the notes)
- 10) **Democritus**—What was his role in the early ideas of atoms?
- 11) **Electron**—What is its charge? Where is it located? What is its relative mass compared to neutrons and protons?
- 12) **Electron cloud model**—What is it?
- 13) **Gamma radiation (γ)**—What is it? Know the symbol γ as designation for gamma. Why isn't gamma considered to be a particle?
- 14) **Half-life**—What is it?
- 15) **Isotopes**—What are they? Be able to recognize examples.
- 16) **Mass number**—What is it? How is it calculated? Why is it not listed on the periodic table?
- 17) **Neutron**—What is its charge? Where is it located? What is its relative mass compared to electrons and protons?
- 18) **Nuclear reactions**—What are they? Why do they violate the conservation laws?
- 19) **Penetrating power**—What is it?
- 20) **Proton**—What is its charge? Where is it located? What is its relative mass compared to electrons and neutrons?
- 21) **Radioisotopes**—What are they? Compare and contrast with isotopes.
- 22) **Rutherford's gold foil experiment**—What did this prove? How was it set up? Give a simple sketch of what happened.
- 23) **Subatomic particles**—How many are there? What are the three important ones?
- 24) **Transmutation**—What is it?

*** Note ***

There will be at least one question pertaining to material in past chapter(s) or unit(s).