

Concordia University
CIVI 231 – Geology for Engineers

Lab Quiz #1 – Class LC
October 02nd, 2013

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) Plutonic rocks are emplaced at depth yet they can be seen at the Earth's surface due mainly to _____ 1) _____
A) catastrophic violent upheavals that bring them to the surface
B) erosion of overlying rocks due to uplift
C) continual ongoing intrusion after the magma solidifies
D) widespread igneous inversion
- 2) _____ involves the study of Earth's origin and development through time based on sequences of strata, fossils, and geologic events, utilizing the geologic time scale as a reference. 2) _____
A) Uniformitarianism
B) Physical geology
C) Historical geology
D) Catastrophism
- 3) Sir William Edmond Logan was appointed the first Director of The Geological Survey of Canada in 1842 and is noted for his observations and maps of _____. 3) _____
A) gold in Prince Edward Island
B) granites in Saskatchewan
C) sandstones in Nunavut
D) coal beds in Wales, Nova Scotia, and copper deposits in Ontario
- 4) Which one of the following is false for minerals? 4) _____
A) They can be a liquid, solid, or glass.
B) They can be identified by characteristic physical properties.
C) They have a specific, predictable chemical composition.
D) They have a specific, internal, crystalline structure.
- 5) Which of the following rock types are not comprised mostly of minerals. 5) _____
A) limestone and rock salt
B) granite and basalt
C) sandstone and conglomerate
D) coal, obsidian, and pumice
- 6) The temperature within the Earth _____ with depth because rocks are poor conductors of heat and they contain small amounts of radioactive elements that generate heat. This gradual change in temperature with depth is called the _____. 6) _____
A) increases, melting profile
B) decreases, crustal thermocline
C) increases, conductivity barrier
D) increases, geothermal gradient

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 7) Plutonic rocks are intrusive and generally consist of mineral grains coarse enough to be readily visible in a hand sample. 7) _____
- 8) Most of the elements in the periodic table are metals. 8) _____
- 9) Positive ions are atoms that have gained electrons during a chemical reaction. 9) _____

- 10) The doctrine of uniformitarianism implies that the current forces and processes shaping the Earth have been operating for a very long time. 10) _____
- 11) The law of superposition applies primarily to sedimentary rocks and lava flows. 11) _____
- 12) Earth's crust and mantle are composed predominantly of solid (not molten) igneous rocks. 12) _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

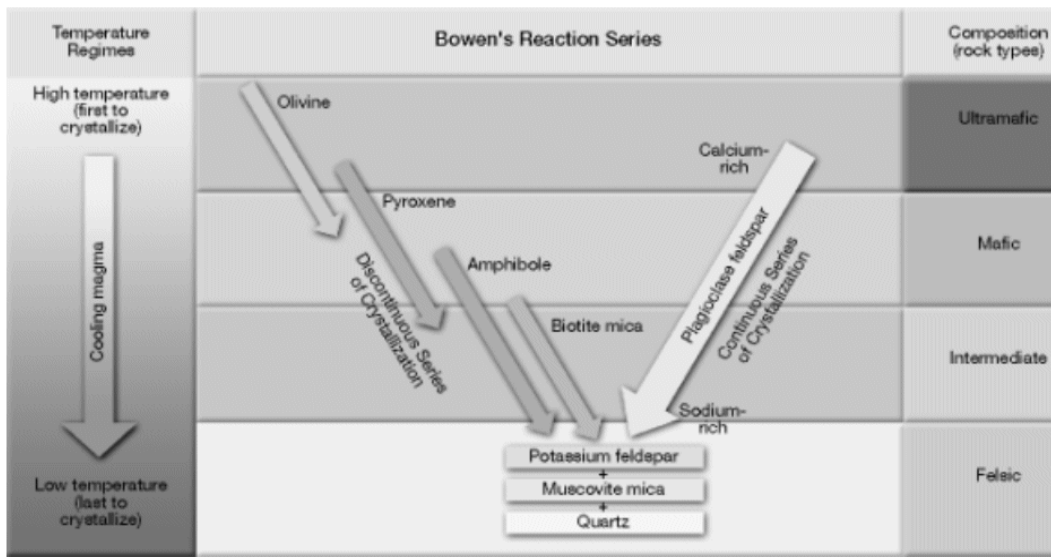
- 13) _____ is the term for the liquid portion of magma. 13) _____
- 14) The massive but tiny central core region of an atom is called the what? 14) _____
- 15) The _____ states that fossil organisms succeed one another in a definite and determinable order. 15) _____
- 16) How old is our planet thought to be from a scientific viewpoint? 16) _____
- 17) In atoms, which electrons are involved in chemical bonding? 17) _____
- 18) Technically, the process whereby ions arrange themselves into orderly patterns during the cooling of a liquid is called _____. 18) _____

Examine the words and/or phrases for each question below and determine the relationship among the majority of words/phrases. Choose the option that does not fit the pattern.

- 19) A) felsic B) intermediate C) graphic D) mafic 19) _____
- 20) A) muscovite B) biotite C) clay D) olivine 20) _____
- 21) A) sodium B) fluorine C) lithium D) boron 21) _____
- 22) A) phenocrysts B) crystals C) groundmass D) vesicles 22) _____

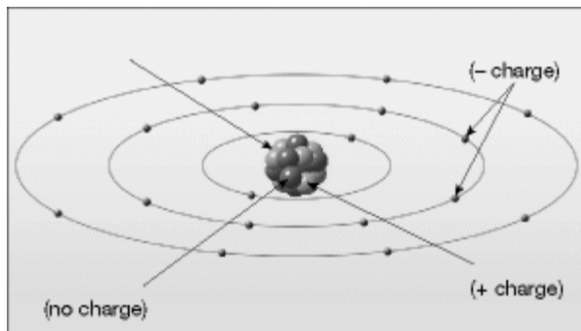
23) In general, what happens in terms of composition as crystallization proceeds down the Bowen's reaction series?

23) _____



24) Label the various parts of an atom in the diagram below.

24) _____



ESSAY. Write your answer in the space provided or on a separate sheet of paper.

25) In the diagram below, match the letter of each illustration to the correct type of plate boundary.

a) transform b) divergent c) convergent

