

Include your name on both this quiz form, and on the scantron form.

Name \_\_\_\_\_

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

- 1) Which of the following best defines the relationship between minerals and rocks?
  - A) A rock consists of atoms bonded in a regular, geometrically predictable arrangement; a mineral is a consolidated aggregate of rock particles.
  - B) A rock has an orderly, repetitive, geometrical, internal arrangement of minerals; a mineral is a lithified or consolidated aggregate of rocks.
  - C) A mineral consists of atoms arranged in a geometrically repetitive structure; in a rock, the atoms are randomly bonded without any geometric pattern.
  - D) In a mineral, atoms are bonded in a regular, repetitive, internal structure; a rock is a lithified or consolidated aggregate of mineral grains.
  
- 2) All of the atoms making up any given element have the same number of \_\_\_\_\_.
  - A) electrons in the nucleus
  - B) neutrons in the outer nuclear shell
  - C) protons in the nucleus
  - D) electrons in the outermost valence shell
  
- 3) Atoms that have an electrical charge due to a gain or loss of electrons are called \_\_\_\_\_.
  - A) ions
  - B) isotopes
  - C) neutrons
  - D) isochrons
  
- 4) When in contact with hydrochloric acid, which mineral gives off bubbles of carbon dioxide gas?
  - A) calcite
  - B) fluorite
  - C) quartz
  - D) halite
  
- 5) The appearance or quality of light reflected from the surface of a mineral is known as \_\_\_\_\_.
  - A) luster
  - B) cleavage
  - C) specific gravity
  - D) streak
  
- 6) Which common mineral is composed entirely of silicon and oxygen?
  - A) olivine
  - B) diamond
  - C) calcite
  - D) quartz
  
- 7) Which of the following silicate minerals is the most abundant in Earth's crust?
  - A) garnet
  - B) olivine
  - C) pyroxene
  - D) feldspars
  
- 8) Which one of the following mineral groups exhibits a sheet-like silicate structure?
  - A) feldspars
  - B) micas
  - C) pyroxenes
  - D) carbonates
  
- 9) The resistance of a mineral to scratching or abrasion is known as \_\_\_\_\_.
  - A) streak
  - B) luster
  - C) cleavage
  - D) hardness
  
- 10) Imagine you are handed a mineral sample. It breaks with a conchoidal fracture but displays no cleavage. It does not react with hydrochloric acid, is a light pink color, and has a nonmetallic luster. It is harder than a streak plate, and has a specific gravity of 2.65. What mineral is it?
  - A) calcite
  - B) quartz
  - C) olivine
  - D) potassium feldspar
  
- 11) You are handed a sample of an unknown silicate mineral. Which two elements **must** it contain?
  - A) silicon and sodium
  - B) iron and silicon
  - C) carbon and hydrogen
  - D) silicon and oxygen

- 12) What element is the most abundant in Earth's crust by weight?  
A) chlorine                      B) oxygen                      C) carbon                      D) lead
- 13) Due to the arrangement of weaker bonds in their crystal lattice, the tendency of certain minerals to break along smooth, parallel planes is known as \_\_\_\_\_.  
A) luster                      B) streak                      C) crystal habit                      D) cleavage
- 14) An atom's mass number is 13 and its atomic number is 6. How many neutrons are in its nucleus?  
A) 13                      B) 6                      C) 7                      D) 19
- 15) Three of the following **are** true for minerals. Which one of the following is **not** true for minerals?  
A) They have an orderly internal crystalline structure.  
B) They can be identified by characteristic physical properties.  
C) They have a specific, predictable chemical composition.  
D) They can be a liquid, solid, or gas.
- 16) A cubic centimeter each of quartz, olivine, and native gold weighs 2.5, 3.0, and 19.8 grams, respectively. These weights indicate that \_\_\_\_\_.  
A) gold and olivine qualify as silicates, but quartz would not  
B) gold has a higher density and specific gravity than quartz and olivine  
C) olivine melts at a higher temperature than either gold or quartz  
D) gold is 6 to 7 times harder than olivine and quartz
- 17) The \_\_\_\_\_ mineral group reacts to hydrochloric acid.  
A) halide                      B) oxide                      C) carbonate                      D) silicate
- 18) \_\_\_\_\_ is the powdered form of the mineral.  
A) Crystal habit                      B) Streak                      C) Hardness                      D) Density
- 19) \_\_\_\_\_ is the softest mineral and \_\_\_\_\_ is the hardest mineral on Mohs scale.  
A) Talc; topaz                      B) Gypsum; quartz                      C) Gypsum; diamond  
D) Talc; diamond
- 20) Which of the following minerals is a silicate (a mineral containing a silicon-bearing ion)?  
A) halite                      B) feldspar                      C) hematite                      D) calcite
- 21) If a mineral has a specific gravity of 3, it must be \_\_\_\_\_ times as dense as water.  
A) 1                      B) 2                      C) 3                      D) 4
- 22) An aggregate of one or more minerals is called a(n) \_\_\_\_\_.  
A) rock                      B) atom                      C) ionic bond                      D) compound
- 23) Limestone is most similar to the mineral \_\_\_\_\_.  
A) gypsum                      B) quartz                      C) halite                      D) calcite

