Key

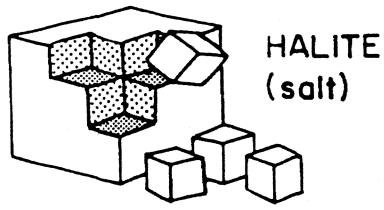
Rocks & Minerals Test Review

1. Which two mineral grains would most likely be found in soil formed from granite?
   (1) olivine and pyroxene
   (2) potassium feldspar and quartz
   (3) plagioclase and pyroxene
   (4) olivine and nepheline

2. Which property would be most useful for identifying igneous rocks?
   (1) kind of cement
   (2) mineral composition
   (3) number of minerals present
   (4) types of fossils present

3. Rhyolite and granite are alike in that they both are
   (1) fine-grained
   (2) dark-colored
   (3) mafic
   (4) felsic

4. What causes the characteristic crystal shape and cleavage (breaking along flat surfaces) of the mineral halite as shown in the diagram below?



   (1) metamorphism of the halite
   (2) the internal arrangement of the atoms in halite
   (3) the amount of erosion the halite has undergone
   (4) the shape of other minerals located where the halite formed

5. Minerals are identified on the basis of
   (1) the method by which they were formed
   (2) the type of rock in which they are found
   (3) the size of their crystals
   (4) their physical and chemical properties

6. Scratching a mineral against a glass plate is a method used for determining the mineral's
   (1) color
   (2) hardness
   (3) luster
   (4) cleavage

7. Which mineral property is illustrated by the peeling of muscovite mica into thin, flat sheets?
   (1) luster
   (2) streak
   (3) hardness
   (4) cleavage

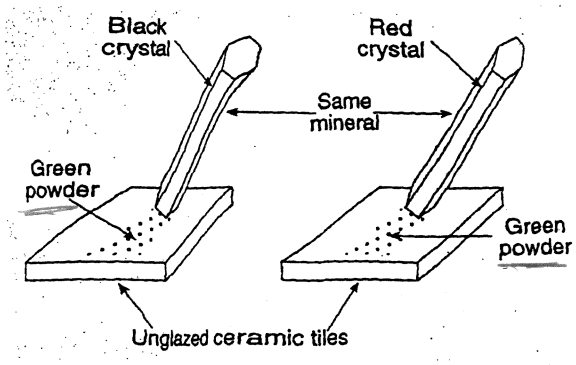
8. The most abundant element in the Earth's crust is
   (1) nitrogen
   (2) oxygen
   (3) silicon
   (4) hydrogen

9. Which type of sedimentary rock contains the greatest range of particle sizes? many sizes
   (1) conglomerate
   (2) sandstone
   (3) sandstone
   (4) siltstone

10. Which property best describes a rock which has formed from sediments?
    (1) crystalline structure
    (2) distorted structure
    (3) banding or zoning of minerals
    (4) fragmental particles arranged in layers

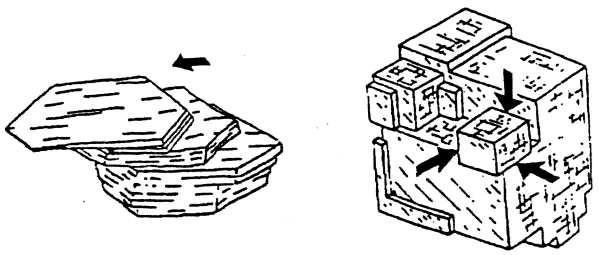
Limestone is a sedimentary rock which may form as a result of
   (1) melting
   (2) recrystallization
   (3) metamorphism
   (4) biologic processes

12. The diagram below shows the results of one test for mineral identification.



Which mineral property is being tested?
   (1) density
   (2) fracture
   (3) streak
   (4) luster

13. The diagrams below illustrate a specific property of certain minerals.



This property is most closely related to the
   (1) arrangement of atoms in the mineral
   (2) impurities found in the mineral
   (3) softness of the mineral
   (4) density of the mineral

14. Which sedimentary rock would be composed of particles ranging in size from 0.0004 centimeter to 0.006 centimeter? SILT
   (1) conglomerate
   (2) dolostone
   (3) siltstone
   (4) shale

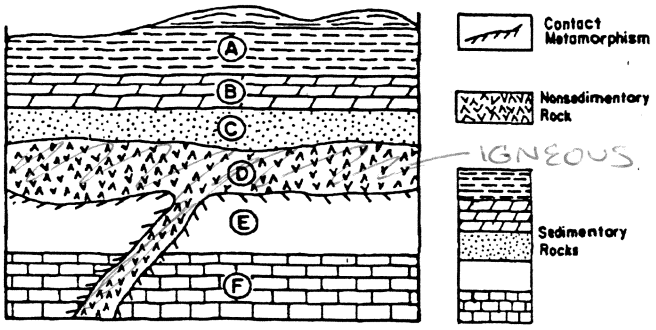
15. A coarse-grained igneous rock contains plagioclase feldspars and pyroxenes, but no quartz. This rock is most likely
   (1) basalt
   (2) rhyolite
   (3) granite
   (4) gabbro

16. What is the main difference between metamorphic rocks and most other rocks?
   (1) Many metamorphic rocks contain only one mineral.
   (2) Many metamorphic rocks have an organic composition.
   (3) Many metamorphic rocks exhibit banding and distortion of structure.
   (4) Many metamorphic rocks contain a high amount of oxygen-silicon tetrahedra.

17. Metamorphic rocks form as the direct result of
   (1) precipitation from evaporating water
   (2) melting and solidification in magma
   (3) erosion and deposition of soil particles
   (4) heat and pressure causing changes in existing rock

KEY

18. Base your answer to the following question on your knowledge of Earth science and the diagram below. The diagram represents a geologic cross section consisting of various sedimentary and nonsedimentary rocks which have not been overturned.



Rock layer *D* is classified as nonsedimentary because it was formed by

(1) the compression and cementing of particles
(2) the evaporation of seawater
(3) biologic processes
(4) the cooling of molten material

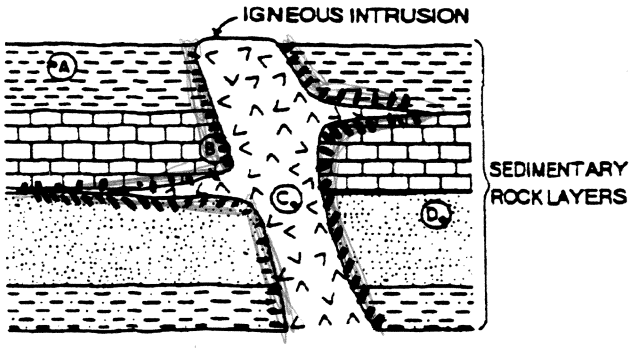
19. Which rock is of felsic composition, low in density, light in color, and coarse grained?

(1) rhyolite
(2) basalt
(3) granite
(4) gabbro

20. Which rocks form relatively thin layers, compared to the thickness of the continent, over large areas of the continents? Sedimentary

(1) granite and gabbro
(2) sandstone and shale
(3) metamorphic rocks
(4) intrusive igneous rocks

21. The diagram below shows an igneous rock intrusion in sedimentary rock layers.



At which point would metamorphic rock most likely be found?

(1) *A*
(2) *B*
(3) *C*
(4) *D*

22. Which type(s) of rock can be the source of deposited sediments?

(1) igneous and metamorphic rocks, only
(2) metamorphic and sedimentary rocks, only
(3) sedimentary rocks, only
(4) igneous, metamorphic, and sedimentary rocks

All Rocks

23. The end product of the weathering of gabbro or basalt rocks is a solution of dissolved material that most likely would contain high amounts of

(1) iron and magnesium
(2) magnesium and potassium
(3) aluminum and iron
(4) aluminum and potassium

24. Which statement about the formation of a rock is best supported by the rock cycle?

(1) Magma must be weathered before it can change to metamorphic rock.
(2) Sediment must be compacted and cemented before it can change to sedimentary rock.
(3) Sedimentary rock must melt before it can change to metamorphic rock.
(4) Metamorphic rock must melt before it can change to sedimentary rock.

25. A fine-grained rock has the following mineral composition:
50 percent potassium feldspar, 26 percent quartz,
13 percent plagioclase, 8 percent biotite, and
3 percent hornblende.

The rock would most likely be

(1) granite
(2) rhyolite
(3) gabbro
(4) basalt