

1. Which statement best describes a general property of rocks?

- 1) Most rocks have a number of minerals in common.
- 2) Most rocks are composed of a single mineral.
- 3) All rocks contain fossils.
- 4) All rocks contain minerals formed by compression and cementation.

2. In which group are all the earth materials classified as minerals?

- 1) feldspar, quartz, and olivine
- 2) granite, rhyolite, and basalt
- 3) cobbles, pebbles, and silt
- 4) conglomerate, sandstone, and shale

3. 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

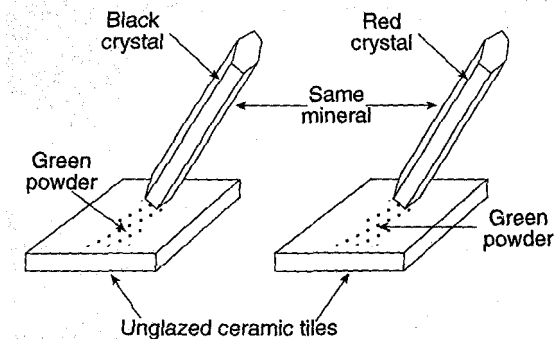
4. Scratching a mineral against a glass plate is a method used for determining the mineral's

- 1) color
- 2) hardness
- 3) luster
- 4) cleavage

5. Which mineral property is illustrated by the peeling of muscovite mica into thin, flat sheets?

- 1) luster
- 2) streak
- 3) hardness
- 4) cleavage

6. 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

7. Which common mineral fizzes when dilute hydrochloric acid (HCl) is placed on it?

- 1) calcite
- 2) feldspar
- 3) quartz
- 4) talc

8. What is the hardness of Sulfur?

- 1) 6.5
- 2) 2
- 3) 3
- 4) 2.5

9. Base your answer to the following question on the data table below.

MINERAL HARDNESS

Moh's Hardness Scale	Approximate Hardness of Common Objects	
Talc	1	
Gypsum	2	Fingernail (2.5)
Calcite	3	Copper penny (3.5)
Fluorite	4	Iron nail (4.5)
Apatite	5	Glass (5.5)
Feldspar	6	Steel file (6.5)
Quartz	7	Streak plate (7.0)
Topaz	8	
Corundum	9	
Diamond	10	

Which statement is best supported by the data shown?

- 1) An iron nail contains fluorite.
- 2) A streak plate is composed of quartz.
- 3) Topaz is harder than a steel file.
- 4) Apatite is softer than a copper penny.

10. Which mineral is an ore of iron and has a characteristic reddish brown streak?

- 1) magnetite
- 2) pyrite
- 3) hematite
- 4) olivine

11. Which mineral shows no cleavage, has a hardness of 6.5, and a composition of SiO_2 ?

- 1) Graphite
- 2) Garnet
- 3) Halite
- 4) Quartz

12. Which mineral has a greater hardness?

- 1) Galena
- 2) Olivine
- 3) Garnet
- 4) Biotite Mica

13. Which mineral has a hardness of 2.5 – 3 and makes a good electrical insulator?

- 1) Pyroxene
- 2) Biotite Mica
- 3) Gypsum
- 4) Magnetite

14. Which mineral has a hardness of 6, and shows cleavage?

- 1) Olivine
- 2) Talc
- 3) Hematite
- 4) Potassium Feldspar

15. Which mineral is white or colorless, has a hardness of 2.5, and splits with cubic cleavage?

- 1) calcite
- 2) halite
- 3) pyrite
- 4) mica

16. Base your answer to the following question on the table below, which shows the characteristics of four different mineral samples.

Mineral Characteristics

Mineral Sample	Color	Luster	Streak	Breakage Pattern
Galena	gray	metallic	gray	breaks into cubes
Halite	colorless	nonmetallic	colorless	breaks into cubes
Quartz	colorless	nonmetallic	colorless	irregular breakage
Gold	yellow	metallic	yellow	irregular breakage

Which two mineral samples would be most difficult to distinguish from each other based on their color, luster, and streak?

- 1) halite and quartz 2) halite and gold 3) galena and quartz 4) galena and gold

17. Base your answer to the following question on Moh's mineral hardness scale and on the chart below showing the approximate hardness of some common objects.

Moh's Mineral Hardness Scale	
Talc	1
Gypsum	2
Calcite	3
Fluorite	4
Apatite	5
Feldspar	6
Quartz	7
Topaz	8
Corundum	9
Diamond	10

Approximate Hardness of Common Objects
Fingernail (2.5)
Copper penny (3.5)
Iron nail (4.5)
Glass (5.5)
Steel file (6.5)
Streak plate (7.0)

Which statement is best supported by this scale?

- 1) A fingernail will scratch calcite, but not quartz.
 2) A fingernail will scratch quartz, but not calcite.
 3) A piece of glass can be scratched by quartz, but not by calcite.
 4) A piece of glass can be scratched by calcite, but not by quartz.

18. Which mineral leaves a green-black powder when rubbed against an unglazed porcelain plate?

- 1) galena 3) hematite
 2) graphite 4) pyrite

19. An unidentified mineral that is softer than calcite exhibits a metallic luster and cubic cleavage. This mineral most likely is

- 1) galena 3) halite
 2) pyrite 4) pyroxene

20. A human fingernail has a hardness of approximately 2.5. Which two minerals are *softer* than a human fingernail?

- 1) calcite and halite 3) graphite and talc
 2) sulfur and fluorite 4) pyrite and magnetite

21. The photograph below shows a piece of halite that has been recently broken.



Which physical property of halite is demonstrated by this pattern of breakage?

- 1) hardness 3) cleavage
 2) streak 4) luster

22. Which home-building material is made mostly from the mineral gypsum?

- 1) plastic pipes 3) drywall panels
 2) window glass 4) iron nails

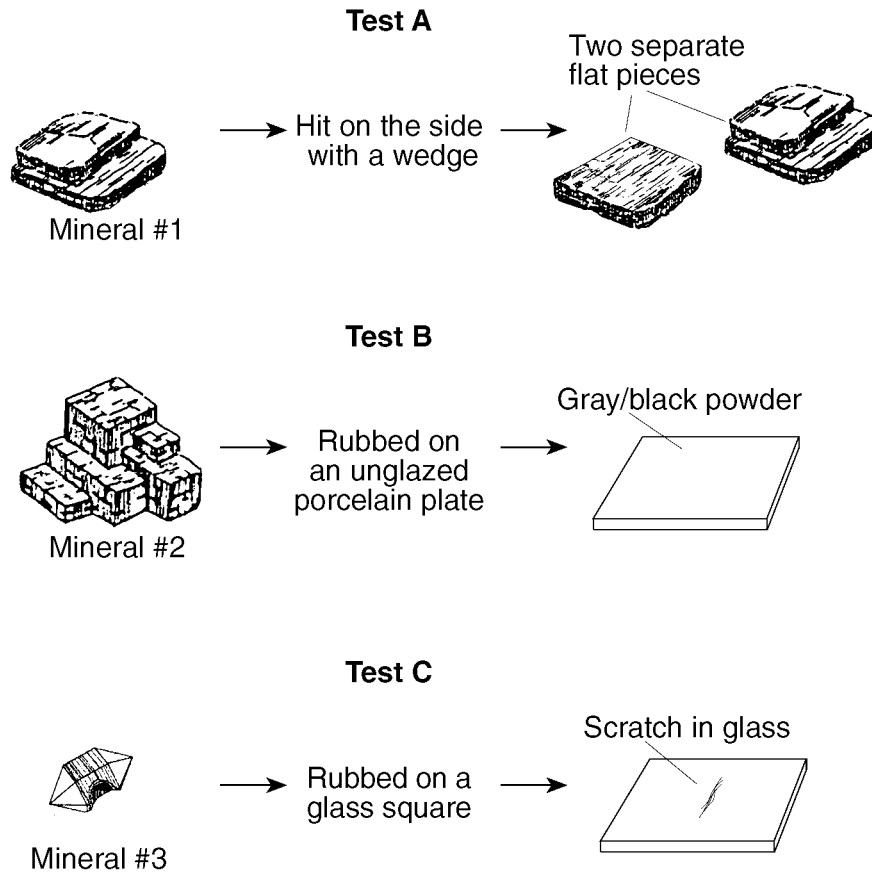
23. Which mineral is composed of Calcium and Fluorine?

- 1) Amphiboles 3) Hematite
 2) Calcite 4) Fluorite

24. How are the minerals biotite mica and muscovite mica different?

- 1) Biotite mica is colorless, but muscovite mica is not.
 2) Biotite mica contains iron and/or magnesium, but muscovite mica does not.
 3) Muscovite mica scratches quartz, but biotite mica does not.
 4) Muscovite mica cleaves into thin sheets, but biotite mica does not.

25. Base your answer to the following question on the diagram below, which shows three minerals with three different physical tests, *A*, *B*, and *C*, being performed on them.



Which sequence correctly matches each test, *A*, *B*, and *C*, with the mineral property tested?

- 1) *A*—cleavage; *B*—streak; *C*—hardness
- 2) *A*—cleavage; *B*—hardness; *C*—streak
- 3) *A*—streak; *B*—cleavage; *C*—hardness
- 4) *A*—streak; *B*—hardness; *C*—cleavage

Answer Key

1. 1

2. 1

3. 4

4. 2

5. 4

6. 3

7. 1

8. 2

9. 3

10. 3

11. 4

12. 3

13. 2

14. 4

15. 2

16. 1

17. 3

18. 4

19. 1

20. 3

21. 3

22. 3

23. 4

24. 2

25. 1
