

Minerals Regents Questions

1. The mineral mica breaks evenly along flat sheets mainly because of its
 - A) density
 - B) chemical composition
 - C) atomic arrangement
 - D) hardness
2. According to the ESRTs, which element is most abundant in the Earth's crust?
 - A) silicon
 - B) oxygen
 - C) nitrogen
 - D) hydrogen
3. Which property is most useful in mineral identification?
 - A) size
 - B) color
 - C) texture
 - D) hardness
4. Certain minerals usually break along flat surfaces, while other minerals break unevenly. This characteristic is due to the
 - A) luster of the mineral
 - B) age of the mineral
 - C) force with which the mineral is broken
 - D) internal arrangement of the mineral's atoms
5. According to the Properties of Common Minerals Earth Science reference table, which mineral scratches dolomite and is scratched by olivine?
 - A) quartz
 - B) potassium feldspar
 - C) muscovite mica
 - D) galena
6. The mineral mica breaks evenly along flat sheets mainly because of its
 - A) atomic arrangement
 - B) chemical composition
 - C) hardness
 - D) density
7. According to the Properties of Common Minerals Earth Science reference table, which mineral leaves a green-black powder when rubbed against an unglazed porcelain plate?
 - A) hematite
 - B) galena
 - C) graphite
 - D) pyrite

Questions 8–10 refer to the following table showing mineral properties.

MINERAL	COLOR	LUSTER	STREAK	HARD-NESS	DENSITY (g/mL)	CHEMICAL COMPOSITION
biotite mica	black	glassy	white	soft	2.8	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$
diamond	varies	glassy	colorless	hard	3.5	C
galena	gray	metallic	grey-black	soft	7.5	PbS
graphite	black	dull	black	soft	2.3	C
kaolinite	white	earthy	white	soft	2.6	$Al_4(Si_4O_{10})(OH)_8$
magnetite	black	metallic	black	hard	5.2	Fe_3O_4
olivine	green	glassy	white	hard	3.4	$(Fe,Mg)_2SiO_4$
pyrite	brass yellow	metallic	greenish-black	hard	5.0	FeS_2
quartz	varies	glassy	colorless	hard	2.7	SiO_2

Definitions:

- LUSTER:** the way a mineral's surface reflects light
- STREAK:** color of a powdered form of the mineral
- HARDNESS:** resistance of a mineral to being scratched (soft-easily scratched; hard-not easily scratched)

Chemical Symbols

Al - Aluminum	Pb - Lead
C - Carbon	Si - Silicon
Fe - Iron	K - Potassium
H - Hydrogen	S - Sulfur
Mg - Magnesium	O - Oxygen

8. Why c both
 composed entirely of the element carbon?
 A) The minerals have different arrangement of carbon atoms.
 B) Only diamond contains radioactive carbon.
 C) The minerals have undergone different amounts of weathering.
 D) Only graphite consists of organic material.
9. Which mineral contains iron, has a metallic luster, is hard, and has the same color and streak?
 A) biotite mica
 B) kaolinite
 C) galena
 D) magnetite
10. Which mineral has a different color in its powdered form than its original form?
 A) pyrite
 B) kaomite
 C) graphite
 D) magnetite