

Practice Questions: Igneous Rocks

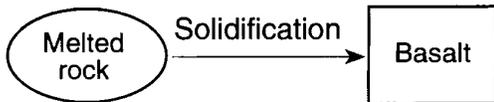
1. What is the color and type of rock that forms oceanic crust at mid-ocean ridges?

- A) light colored and igneous
- B) light colored and sedimentary
- C) dark colored and igneous**
- D) dark colored and sedimentary

2. Obsidian's glassy texture indicates that it formed

- A) slowly, deep below Earth's surface
- B) slowly, on Earth's surface
- C) quickly, deep below Earth's surface
- D) quickly, on Earth's surface**

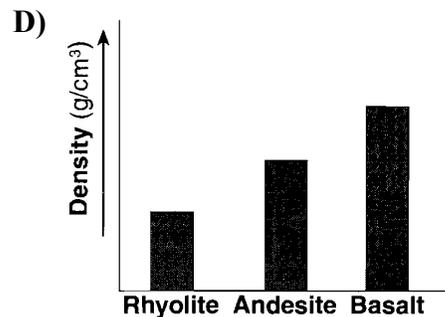
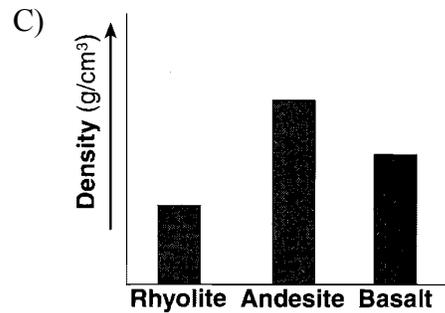
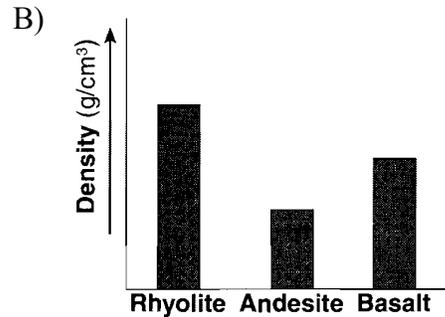
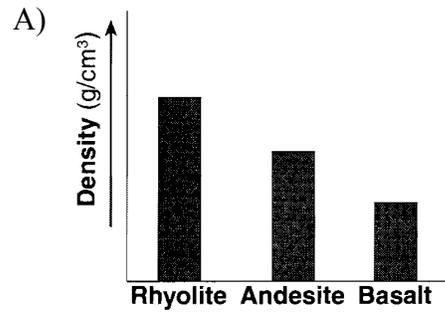
3. The flowchart below illustrates the change from melted rock to basalt.



The solidification of the melted rock occurred

- A) slowly, resulting in fine-grained minerals
- B) slowly, resulting in coarse-grained minerals
- C) rapidly, resulting in coarse-grained minerals
- D) rapidly, resulting in fine-grained minerals**

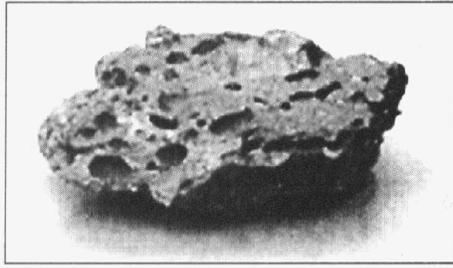
4. Which graph best represents the relative densities of three different types of igneous rock?



5. Which igneous rock is dark colored, cooled rapidly on Earth's surface, and is composed mainly of plagioclase feldspar, olivine, and pyroxene?

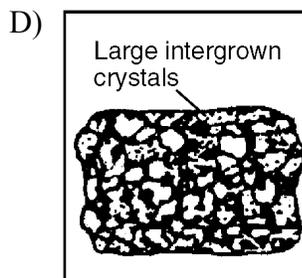
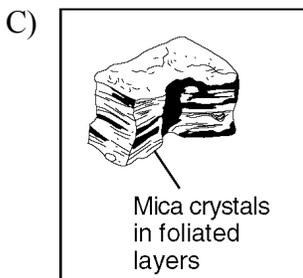
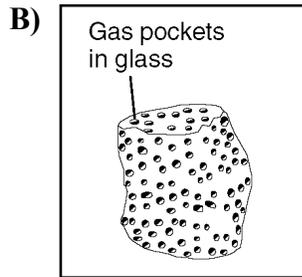
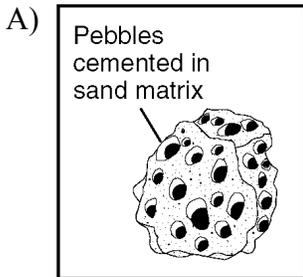
- A) obsidian
- B) rhyolite
- C) gabbro
- D) scoria**

6. Base your answer to the following question on The photograph below shows an igneous rock.

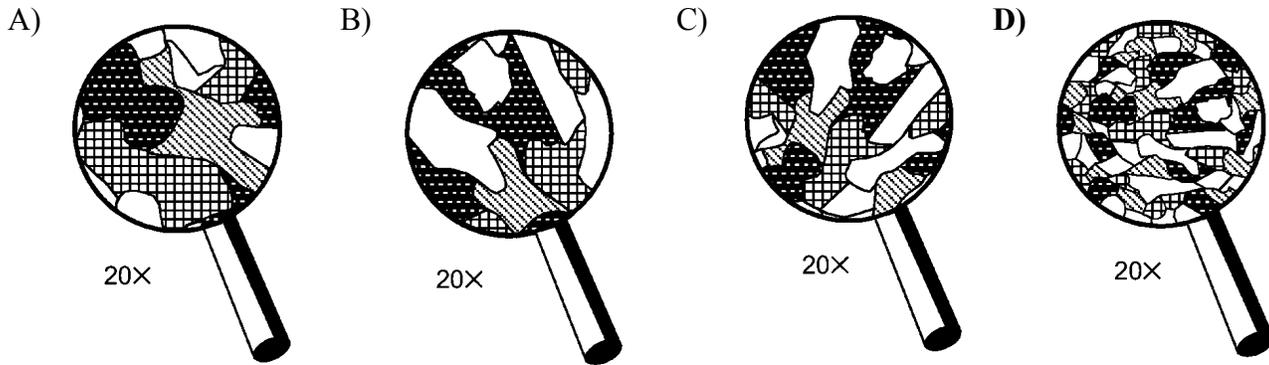


What is the origin and rate of formation of this rock?

- A) plutonic with slow cooling
 - B) plutonic with rapid cooling
 - C) volcanic with slow cooling
 - D) volcanic with rapid cooling**
7. What is the origin of fine-grained igneous rock?
- A) lava that cooled slowly on Earth's surface
 - B) lava that cooled quickly on Earth's surface**
 - C) silt that settled slowly in ocean water
 - D) silt that settled quickly in ocean water
8. When granite melts and then solidifies, it becomes
- A) a sedimentary rock
 - B) an igneous rock**
 - C) a metamorphic rock
 - D) sediments
9. Which rock most probably formed directly from lava cooling quickly at Earth's surface?



10. The diagrams below show the crystals of four different rocks viewed through the same hand lens. Which crystals most likely formed from molten material that cooled and solidified most rapidly?



11. An extrusive igneous rock with a mineral composition of 35% quartz, 35% potassium feldspar, 15% plagioclase feldspar, 10% biotite, and 5% amphibole is called

- A) **rhyolite** B) granite
C) gabbro D) basaltic glass

12. Which process is necessary for the formation of igneous rocks?

- A) erosion B) deposition
C) **solidification** D) metamorphism

13. Which characteristic provides the best evidence that obsidian rock formed in an extrusive environment?

- A) layers of rounded fragments
B) distorted bands of large mineral crystals
C) **noncrystalline glassy texture**
D) mineral cement between grains

14. Which two igneous rocks could have the same mineral composition?

- A) rhyolite and diorite
B) pumice and scoria
C) peridotite and andesite
D) **gabbro and basalt**

15. Which relative concentrations of elements are found in a felsic rock?

- A) **a high concentration of aluminum and a low concentration of iron**
B) a high concentration of iron and a low concentration of aluminum
C) a high concentration of magnesium and a low concentration of iron
D) a high concentration of magnesium and a low concentration of aluminum

Answer Key
Regents Preparation-Igneous Rocks

1. **C**
 2. **D**
 3. **D**
 4. **D**
 5. **D**
 6. **D**
 7. **B**
 8. **B**
 9. **B**
 10. **D**
 11. **A**
 12. **C**
 13. **C**
 14. **D**
 15. **A**
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