Igneous Rock WS 1

Use your Handy Dandy Earth Science Reference Tables, to answer the following questions. Answer in full sentences where appropriate.

1. What is the texture of granite? _________________

2. What is the grain size of granite? _________________

3. Is granite intrusive or extrusive? _________________

4. Plutonic is also referred to as (intrusive) (extrusive).

5. List the minerals present in granite. ______________________________

6. Which minerals MUST be in granite (hint: they are in granite but rare in other igneous rocks)? _____________ and _____________

7. What is the mineral composition of granite called? ______________

8. List the minerals present in andesite. ______________________________

9. Estimate the percentage of each mineral in gabbro (look the first “b” in gabbro).
   - Olivine _____________%
   - Pyroxene _____________%
   - Plagioclase feldspar _____________%
   - Biotite mica _____________%
   - Amphibole (hornblende) _____________%

10. What is the texture of gabbro? _________________

11. How is basalt similar to gabbro? ______________________________

12. How is basalt different from gabbro? ______________________________
12. Name a fine-grained igneous rock with no pyroxene. ____________________

13. Name a coarse-grained igneous rock with no pyroxene. ____________________

14. Which mineral does peridotite have more of than gabbro? ____________________

15. What is the difference between an igneous rock with a glassy texture and a fine texture? What causes this?
_____________________________________________________________________

16. Compare rhyolite to basalt (answer in one word only):
   a. Which has a lower density? ____________________
   b. Which has a lighter color? ____________________
   c. Which has a more mafic composition? ____________________
   d. Which has a greater percentage of biotite in it? ____________________
   e. Which contains Quartz? ____________________

17. Name a felsic, very coarse, intrusive rock. ____________________

18. Felsic igneous rocks generally have a ___________ color.

19. Mafic igneous rocks generally have a ___________ density.

20. Intrusive igneous rocks have ___________ (large/small) mineral crystals because of ___________ (fast/slow) cooling.

21. Estimate the percentage of each mineral in rhyolite (look under the “o” in rhyolite).
   
   Potassium feldspar ___________%
   Quartz ___________%
   Plagioclase feldspar ___________%
   Biotite mica ___________%
   Amphiboles (hornblende) ___________%
Igneous Rocks II

Use your *Handy Dandy Earth Science Reference Tables*, to answer the following questions. Answer in full sentences where appropriate.

1. What is the texture of rhyolite?

2. What is the grain size of rhyolite?

3. Is rhyolite intrusive or extrusive?

4. Plutonic is also referred to as (intrusive) (extrusive).

5. Estimate the percentage of each mineral in rhyolite (look under the “o” in rhyolite).
   - Potassium feldspar __________% 
   - Quartz __________%
   - Plagioclase feldspar __________%
   - Biotite mica __________%
   - Amphiboles (hornblende) __________%

6. List the minerals present in andesite.

7. What is the texture of scoria?

8. Name a fine-grained igneous rock with no quartz.

9. Name a coarse-grained igneous rock with no quartz.

10. Which mineral is present in much greater quantities in peridotite than in gabbro?

11. What is the difference between an igneous rock with a glassy texture and a fine texture? What causes this?
12. Compare rhyolite to basalt (answer in one word only):
   a. Which has a higher density?
   b. Which has a lighter color?
   c. Which has a more felsic composition?
   d. Which has a greater percentage of biotite in it?
   e. Which contains Olivine?

13. Name a mafic, intrusive rock.


15. Mafic igneous rocks generally have a _____________ color.

16. Felsic igneous rocks generally have a _____________ density.

17. Extrusive igneous rocks have (large) (small) mineral crystals because of (fast) (slow) cooling.