

## Review of Extrusive Igneous Rocks

The following homework is based on the lab lectures for labs 4 and 5. The PowerPoint versions are available on the web pages.

1. MORB stands for \_\_\_\_\_.

2-3. Basalts displaying a “pillow” structure are believed to have formed in one of two ways.

These are:

2. \_\_\_\_\_

3. \_\_\_\_\_

4-5. In the terminology used in the United States, the major minerals of diabase are

4) \_\_\_\_\_ and 5) \_\_\_\_\_.

6. Diabasic texture is (name and describe): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

7-9 The major minerals of andesite are:

7) major felsic mineral (name and variety) \_\_\_\_\_

8) most common mafic mineral \_\_\_\_\_

9) other possible mafic minerals \_\_\_\_\_ and \_\_\_\_\_.

10. What is the major difference between dacite mineralogy and andesite mineralogy?

\_\_\_\_\_  
\_\_\_\_\_

11-12 A lithic fragment is 11) \_\_\_\_\_, while a vitric fragment is

12) \_\_\_\_\_.

13-14 Compare bombs and blocks.

13) (bomb) \_\_\_\_\_

\_\_\_\_\_  
14) (block) \_\_\_\_\_

\_\_\_\_\_

15. The names of extrusive rocks, when based on phenocrysts, should be preceded by the prefix \_\_\_\_\_.

16. A \_\_\_\_\_ is an individual particle ejected during a volcanic eruption, and is usually classified according to size.

17-19 Welded tuff is siliceous tuff indurated by the welding together of glass particles under the combined action of three agents, which are:

17) \_\_\_\_\_

18) \_\_\_\_\_, and

19) \_\_\_\_\_

20. Rhyolite grades into \_\_\_\_\_ as quartz content decreases.

21-22 Typical alkali feldspars phenocrysts in rhyolite are:

21) \_\_\_\_\_ or

22) \_\_\_\_\_

23. What is the  $P/(A+P)$  range for latite? \_\_\_\_\_

24-26. Trachyte mineralogy:

24) Major type of feldspar \_\_\_\_\_

25) Compositional range of plagioclase: \_\_\_\_\_

26) Most common mafic: \_\_\_\_\_

27-29. What are the water contents of the following rocks?

27) Obsidian \_\_\_\_\_

28) Pearlite \_\_\_\_\_

29) Pitchstone \_\_\_\_\_

30. The chemical composition of both pumice and vitrophyre is like that of which extrusive rock? \_\_\_\_\_