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? ________________