PREPARING FOR TEST NO. 2 ON CLASSIFICATION

TEST No. 2 will be on classification of igneous rocks. Below are some examples of questions that you might be asked in the test. You will not be provided with labelled copies of the classification diagrams so you must make sure that you know these diagrams well.

EXAMPLE QUESTION ONE

The QAPF diagram for plutonic rocks is given at right. Label at least four fields on this diagram. What does Q stand for in QAPF.

EXAMPLE QUESTION TWO

A rock contains that following modal mineralogy: Quartz = 5%; Feldspar = 70% (plagioclase = 30%, K-feldspar = 70%); Hornblende = 15%; magnetite = 5%; Biotite = 5%. What sort of rock is this and where will it plot on the QAPF diagram?

Remember to answer question two correctly, you need to normalise the QAPF minerals to 100% and then plot them. A+P together should make up 100%, so the proportion of these two minerals should not change when the data is normalised



EXAMPLE QUESTION THREE

A rock contains the following normalised modal mineralogy: Clinopyroxene = 50%; olivine = 30%; Hornblende = 20%. What sort of rock is it?



EXAMPLE QUESTION SIX

А

Under what conditions will a rock lot on the diagram at left? What is the maximum modal amount of quartz a rock would have before it would no longer plot on the diagram at left?



EXAMPLE QUESTION FIVE

Given the following data from a series of fine grained rocks, what type of rocks are these?

	Rock 1	Rock 2	Rock 3
SiO ₂	50.23	51.67	48.36
Na ₂ O	3.97	4.68	3.28
K ₂ O	5.12	7.24	1.35

EXAMPLE QUESTION SIX

If a rock has less than 45% SiO₂ in it, is it likely to be a volcanic rock or a plutonic rock. Can you name a rock that would have less than 45% SiO₂?