Quadrant II – Transcript and Related Materials

Programme: Bachelor of Science (Third Year)

Subject: Geology

Paper Code: GEC107

Paper Title: Igneous Petrology

Unit: 2

Module Name: IUGS Classification of Igneous rocks-I

Module No: 13

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Notes

IUGS Classification of Igneous rocks

A plutonic rock may be classified mineralogically based on the actual proportion of the various minerals of which it is composed (called the mode). The International Union of Geological Sciences (IUGS). Sub-commission on the Systematics of Igneous Rocks in 1973 suggested the use of the modal composition for classifying various igneous rocks by using Ternary (triangular) diagrams.

The proportions of three essential mineral groups (recalculated to total 100%) can be plotted at three corners of an equilateral triangle. In one of such diagrams used for classifying felspathic plutonic, two triangles are joined along one common base to produce a four cornered rhombus so that four mineral groups can be represented simultaneously. The QAPF diagrams are used for classifying feldspar bearing plutonic and volcanic rocks. Separate triangular classifications are also shown for mafic and ultramafic rocks.