

December 1, 2012

Time: 1 hour 30 min

**Oulu University
Dept. of Geology
Magmatic Ore Deposits 772671S**

Answer 4 questions and make sketches where necessary

1. Discuss exploration criteria for magmatic Cr and V deposits (i.e. where do such deposits occur, on a global scale and within their actual host bodies, and what governs the quality of the ore).
2. Explain in detail the several factors that are important in the formation of komatiite-hosted Ni deposits.
3. Discuss the contrasting tectonic environments for Ni-Cu and PGE deposits (i.e. which type of deposits occur in which environment, and give reasons)
4. Using geochemistry, how can you evaluate whether a poorly outcropping layered intrusion is prospective for PGE deposits?
5. Primary diamond deposits occur on cratons, but not all cratonic kimberlite pipes are diamondiferous. Give some reasons.