1. How do rocks melt? Differentiate Batch melting and Fractional melting. [2 Points]

2. What are trace elements? Explain their distribution behaviour during partial melting. [2 Points]

3. What are possible magmatic processes that give rise to mineralization? [2 Points]

4. Name some of the oxide and sulfide orthomagmatic deposits with examples? [2 Points]


6. Indicate the temperature, pressure, depth zone in which diamond is likely to be stable. How the diamonds transported by kimberlitic magma, are still stable at shallower depths in the crust? [2 Points]

7. Lower mantle is relatively enriched in carbon than upper mantle but doesn't likely to contain diamond. Why? [2 Points]

8. What are ophiolite complexes and what types of magmatic ore deposits are expected to be present there? [2 Points]

9. Describe in brief the possible mechanism of genesis and type of chromite deposit found in layered mafic complexes with respect to quartz-olivine-chromite ternary system. [2 Points]

10. Describe the settings in which magmas of granitic (felsic/calc-alkaline) composition are generated. Also, indicate the types of mineralization (of metals) that you would expect there. [2 Points]

11. Briefly state two broad tectonic regimes in which mineralization are associated with basaltic magmatism. Add a note on the nature of mineralization (in terms of the metals and the types of deposits) in these two regimes. [2 Points]

12. Bring out two points of difference between Algoma-type and Superior-type BIF. [2 Points]

13. How are carbonatitic melt generated? What mechanism would you suggest for the enrichment of REEs from carbonatitic magma? [2 Points]

Due Date Exceeded.
As per our records you have not submitted this assignment.