

Answer **FOUR (4)** questions only

Illustrate your answers with sketch diagrams where necessary

1. Compare and contrast followings. (25 marks)
 - a) Tubular ore bodies and disseminated ore bodies
 - b) VMS deposits and Porphyry Cu deposits
 - c) Volcanic hosts and plutonic hosts in igneous host rocks

2. Discuss the following processes of formation of mineral deposits. (25 marks)
 - a) Fractional Crystallization
 - b) Metamorphic Processes

3. (25 marks)
 - a) What is hydrothermal solution?
 - b) What are the major sources of hydrothermal solution and transportation mechanism of them?
 - c) Discuss the relationship between plate tectonic theory and formation of hydrothermal deposits giving examples.

4. "Marine environment is the potential source of mineral resources in future". Briefly discuss this statement. (25 marks)

5. Write short notes on the followings. (25 marks)
 - a) Hydrothermal Mineral Deposits
 - b) Secondary Mineral Deposits
 - c) Pegmatites