

Instructions: Draw neat diagrams wherever necessary.
Write proper answer number.

- Q-1** Describe the process of crystallisation of bi-component magma made up of two immiscible components. [10]
- OR**
- Q-1 (a)** Types of magma. [05]
(b) Under-saturated minerals. [05]
- Q-2** Discuss the basic principles of thermodynamics. [10]
- OR**
- Q-2 (a)** Norm classification. [05]
(b) Ultramafic igneous rocks. [05]
- Q-3** Explain the basic principles of palaeoenvironment analysis. [10]
- OR**
- Q-3 (a)** Calcareous deposits of chemical origin. [05]
(b) Post-depositional sedimentary structures. [05]
- Q-4** Write a note on dynamothermal metamorphism of calcareous and basic igneous rocks. [10]
- OR**
- Q-4 (a)** Composition-paragenetic diagrams. [05]
(b) Meso and Cata zone of metamorphism. [05]
- Q-5** **Attempt any ten out of twelve.** [10]
(i) Define pyrogenetic minerals.
(ii) What are meta-silicate minerals?
(iii) State the discontinuous Bowen reaction series.
(iv) What is graphic intergrowth?
(v) Define assimilation.
(vi) What is a phase diagram?
(vii) Define residual deposits.
(viii) What is diagenesis?
(ix) Name deep-sea environments.
(x) Define saussuritisation.
(xi) Name any two stress minerals.
(xii) How undulose extinction developed in minerals?

