

Roll No.

Total Pages : 2

CMDQ/M-24

5562

GEOCHEMISTRY

Paper–G–401

Time Allowed : 3 Hours]

[Maximum Marks : 75

Note : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Write short notes on the following :
 - (a) Objectives of Geochemistry.
 - (b) REE patterns in Geochemical modeling and their uses.
 - (c) Geochemistry of Uranium.
 - (d) Stable isotopes of Hydrogen.

UNIT–I

2. Discuss about the Chemical composition and characteristics of Hydrosphere.
3. (a) Types and composition of Meteorites.
(b) Siderophile and Lithophile.

UNIT–II

4. What are trace elements? Describe the applications of trace elements in geology.
5. (a) Ionic potential as physico-chemical factor in sedimentation.
(b) Distribution Coefficient and its uses in Geochemical modeling.

UNIT–III

6. Discuss about the principle and application of Fission track Dating.
7. (a) Sm-Nd method of Dating.
(b) Rb-Sr method of Dating.

UNIT–IV

8. Describe about the significance of Stable isotope geochemistry in geology.
9. (a) Delta ^{13}C characterization of Ocean-water masses.
(b) Significance of delta D and delta ^{18}O in Hydrological studies.