

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 13C characterization of Ocean-water masses.  
(b) Significance of delta D and delta 18O in Hydrological studies.