

Roll No. ....

Total Pages : 2

**CMDQ/M-24**

**5568**

## **GEOCHEMISTRY-I**

Paper-GT-402

Time Allowed : 3 Hours]

[Maximum Marks : 100

**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) Significance of Trace elements.
  - (c) Geochemistry of Uranium.
  - (d) How to determine the stable isotopes of Carbon ?

### **UNIT-I**

2. Discuss about the Geochemical classification of elements.
3. (a) Law of Thermodynamics and their use in Geology.  
(b) Lithophile elements.

### **UNIT-II**

4. Describe the principle of Ionic substitution in minerals with examples.
5. (a) Hydrogen Ion concentration as physico-chemical factors of sedimentation.  
(b) Geochemistry of Biosphere.

### **UNIT-III**

6. Discuss about the principle and application of K-Ar method of Dating.
7. (a) Geochemistry of Thorium.  
(b) Principle of Rb-Sr method of Dating.

### **UNIT-IV**

8. How to determine the stable isotopes of Oxygen?
9. (a) Significance of Stable isotope geochemistry.  
(b) Stable isotopes of Hydrogen.