

Model Question Paper SET1
Paper : MJ 10 (GEOCHEMISTRY AND ISOTOPE GEOLOGY)
Subject : Geology

Full Marks: 75

Time: 3 hours

Group A

(Short answer-type compulsory questions)

Q1. Fill in the blanks: [5x1=5]

- a) The most abundant element in the Earth's crust by weight is _____
- b) Elements present in very small concentrations are known as _____ elements
- c) Elements such as La, Ce and Nd belong to the _____ element group. _____
- d) Geochemical anomalies are important tools in _____ exploration
- e) Atoms having the same atomic number but different mass numbers are called _____

Q2. Describe Goldschmidt's geochemical classification of elements with suitable examples. [5]

Q3. Describe the major geochemical reservoirs of the Earth. [5]

Group B [4 X 15]

Answer any four

(Subjective/ Descriptive questions)

Q4. Discuss the distribution of elements in the Earth with reference to major, minor and trace elements.

Q5. Explain the concept of geochemical reservoirs and discuss the transfer of elements between different reservoirs.

Q6. Explain compatible and incompatible elements and discuss their behaviour during partial melting and crystallization.

Q7. Describe the any one U–Pb/ Rb–Sr / Sm–Nd decay schemes and discuss its geological applications

Q8. Explain the basic principles of thermodynamics and discuss their relevance to geological processes

Q9. Discuss the nitrogen cycle in the Earth system

Mr.Kalyan Roy
Assistant Professor
Department of Geology
P.P.K. College , Bundu