

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1223

J

Unique Paper Code : 32191201

Name of the Paper : Elements of Geochemistry

Name of the Course : **B.Sc. (Hons) Geology, I Year**
CBCS

Semester : II

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **five** questions.
3. **All** questions carry equal marks.

1. Discuss in brief the classification of meteorites and its relevance in understanding the composition of our Earth.

P.T.O.

2. What are the sources of heat inside the Earth? Discuss the different mechanism of magma generation inside the solid earth? Explain with suitable examples and diagrams.
3. Discuss the geochemical classification of elements.
4. Briefly discuss the radiometric dating method of the Rb-Sr system with special reference to isochron.
5. Write a brief note on the composition of the Earth's Mantle with special reference to phase changes.
6. Discuss basic decay equation and describe the relationship between half life and decay constant. What are the different decay mechanisms?
7. List and discuss various sub-processes of nucleosynthesis that are responsible for the synthesis of elements heavier than Fe and Ni during planetary differentiation?
8. Explain Goldich's stability series? Discuss the effect of chemical weathering on igneous rocks in the near-surface geochemical environment?