

M.Sc. DEGREE EXAMINATION, NOVEMBER 2016.

THIRD SEMESTER

Geology

Paper IV — GEOCHEMISTRY

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Meteorites.
2. Geochemical classification of elements.
3. Ionic substitution
4. Pauling' rules.
5. Radiogenic Isotopes.
6. Stable Isotopes.
7. Geochemical anomaly
8. Geobotanical survey

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Describe the structure, composition and distribution of elements in the earth.

Or

10. Explain briefly the Geochemistry of hydrosphere, biosphere and atmosphere.

11. Discuss in detail the elementary crystal chemistry and thermodynamics

Or

12. Explain the geochemistry of Uranium and thorium. Add a note on their origin.

13. Describe briefly the geochemistry of carbon, oxygen and sulfur isotopes.

Or

14. Discuss about the Carbon dating and its applications to geology.

15. Explain in detail the geochemical method for prospecting of petroleum and natural gas.

Or

16. Describe in detail about the primary and secondary dispersion of elements.

