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(Pages: 2)

Name: .....

Reg.No: .....

**FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2023**

(CBCSS - PG)

(Regular/Supplementary/Improvement)

**CC19P GEL4 C10 - GEOCHEMISTRY AND ISOTOPE GEOLOGY**

(Applied Geology)

(2019 Admission onwards)

Time : 3 Hours

Maximum : 30 Weightage

**Part-A**

Answer any *four* questions. Each question carries 2 weightage.

1. Explain types of bonding.
2. Explain alpha ladder process.
3. Explain multivariate plots in geochemistry.
4. Describe major, minor, trace elements.
5. Explain geological carbon cycle.
6. Explain principles of isotopic dating.
7. Define Carbon isotope.

**(4 × 2 = 8 Weightage)**

**Part-B**

Answer any *four* questions. Each question carries 3 weightage.

8. Describe the origin of the elements.
9. Explain Gibbs phase rule.
10. State first and second law of thermodynamics.
11. Discuss the role of Trace elements and REE study in Geochemistry.
12. List primary and secondary minerals in saprolite.
13. Explain Rb- Sr method of dating.
14. Discuss on the methods of fission track method.

**(4 × 3 = 12 Weightage)**

**Part-C**

Answer any *two* questions. Each question carries 5 weightage.

15. Explain Goldschmidt's classification of elements.

16. Explain U-Th-Pb method of dating.
17. Explain on flame photometer.
18. Discuss on ICP-MS.

**(2 × 5 = 10 Weightage)**

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