

24P347

(Pages: 2)

Name:

Reg.No:

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2025

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19PGEL3C09 - IGNEOUS AND METAMORPHIC PETROLOGY

(Applied Geology)

(2019 Admission onwards)

Time : 3 Hours

Maximum : 30 Weightage

Part-A

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

1. Explain significance of Bowen's Discontinuous reaction series.
2. Explain Fractional Crystallisation.
3. Explain cotectic line and eutectic point.
4. Explain differentiation index.
5. Explain different types of Granites.
6. Explain phase rule in Metamorphism.
7. Explain net transfer reactions.

(4 × 2 = 8 Weightage)

Part-B

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

8. Explain igneous structures and their link to petrogenesis.
9. Explain Di- An phase diagram with neat sketches.
10. Explain Streckiesen's classification of gabbroic rocks.
11. Explain petrogenesis of Basalts.
12. Discuss various metamorphic facies series with suitable diagrams.
13. Describe paired metamorphic belt with an example.
14. Explain the formation of skarn.

(4 × 3 = 12 Weightage)

Part-C

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

15. Evaluate the role of trace elements in assessing the petrogenesis of igneous rocks.

16. Formulate the crystallization sequence of melts falling in the different liquidus surface in Diopside-Albite-Anorthite system.
17. Explain deformation mechanism and high strain metamorphic textures.
18. Explain anatexis and formation of migmatites.

(2 × 5 = 10 Weightage)
