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Name : .....

Reg. No : .....

**SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2025**

(CBCSS-PG)

(Regular/Supplementary/Improvement)

**CC19P GEL2 C05 - CRYSTALLOGRAPHY AND MINERALOGY**

(Applied Geology)

(2019 Admission onwards)

Time: 3 Hours

Maximum: 30 Weightage

**Part-A**

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

1. Spherical Projection.
2. Anharmonic ratio.
3. Mica plate.
4. Amphibole group of minerals.
5. Feldspar minerals.
6. Garnet minerals.
7. Average mineralogical composition of crust.

**(4 × 2 = 8 Weightage)**

**Part-B**

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

8. Symmetry operations.
9. Crystal classes with Schoenflies notations.
10. Pleochroism and pleochroic scheme.
11. Biaxial interference figure.
12. Chemical bond and its types.
13. Aluminum Silicates.
14. Scapolite, Sphene, Zircon.

**(4 × 3 = 12 Weightage)**

**Part-C**

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

15. Applications of X-ray Crystallography.

16. Explain the derivation of 32 crystal classes.
17. Detail the optical properties of uniaxial and biaxial minerals and distinguish between indicatrices produced by them.
18. What are Single chain silicates? Describe main characteristics of various minerals of Pyroxene group.

**(2 × 5 = 10 Weightage)**

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