

22P245

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Name: .....

Reg.No: .....

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

(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. Stereographic projection of crystals.
2. Symmetry elements of Hexagonal system.
3. Sign of elongation in minerals.
4. Structure and classification of silicates.
5. Spinel group of minerals.
6. Aluminum silicates.
7. Epidote minerals.

**(4 × 2 = 8 Weightage)**

**Part-B**

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

8. Repetition Theory
9. Law of Anharmonic ratio.
10. Optic sign determination in uniaxial minerals.
11. Optical indicatrix.
12. Physical and optical properties of Pyroxene group of minerals.
13. Accessory minerals.
14. Mineral transformations in the mantle with depth.

**(4 × 3 = 12 Weightage)**

**Part-C**

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

15. Describe the basic principles of X- ray diffraction method. How are minerals identified from X-ray diffraction patterns?
16. Explain Schoenflies and Herman Mauguin notations.
17. Explain optical properties of minerals.
18. Explain Structure, chemistry, physical and optical characters and paragenesis of Amphibole group of minerals.

**(2 × 5 = 10 Weightage)**

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