23P245 (Pages: 2) Name: .....

Reg.No: .....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2024

(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 Orthorhombic system.
3. Double Refraction.
4. Coordination number.
5. Feldspar minerals.
6. Physical and optical properties of Garnet group of minerals.
7. Sphene.

(4 × 2 = 8 Weightage)

Part-B

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

8. Symmetry operations.
9. Napier's rule.
10. Plane polarized and cross polarized light.
11. Acute and obtuse biaxial interference figures.
12. Mica group of minerals.
13. Physical and optical properties of Quartz.
14. Average mineralogical composition of crust and mantle.

(4 × 3 = 12 Weightage)

Part-C

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

15. Define Bragg's law. Explain how powder diffraction method is useful in the study of minerals.
16. Write an essay on crystal notations. Add a note on comparison between different types of crystal notations.
17. Describe the determination of optic sign in uniaxial and biaxial minerals.
18. What are Single chain silicates? Describe main characteristics of various minerals of Pyroxene group.

(2 × 5 = 10 Weightage)

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