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Name: .....

Reg.No: .....

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

(CBCSS - UG)

(Regular/Supplementary/Improvement)

**CC20 GEO4I B04 - OPTICAL AND DESCRIPTIVE MINERALOGY**

(Geology)

(2020 Admission onwards)

Time : 2.00 Hours

Maximum : 60 Marks

Credit : 3

**Part A** (Short answer questions)

Answer *all* questions. Each question carries 2 marks.

1. EMS
2. Snell's law.
3. Uniaxial indicatrix.
4. Optic axial angle.
5. Inclined extinction.
6. Describe the rocks having olivine as major constituents.
7. Pyralspite group.
8. Cleavages in pyroxenes.
9. General formula of Amphiboles.
10. Tanzanite.
11. Sillimanite.
12. Mode of occurrence of Zeolites.

**(Ceiling: 20 Marks)**

**Part B** (Short essay questions - Paragraph)

Answer *all* questions. Each question carries 5 marks.

13. Optical properties under plane polarized light.
14. Brewster's law.
15. Alkali Feldspar.
16. Structure and composition of Chlorite.
17. Modes of occurrence and uses of Quartz.

18. Chemistry, mode of occurrence and uses Dolomite.
19. Chemistry, mode of occurrence and uses of Apatite.

**(Ceiling: 30 Marks)**

**Part C (Essay questions)**

Answer any *one* question. The question carries 10 marks.

20. Explain optical accessories and uses with neat sketches.
21. Describe the mineralogy, structure, chemistry, optical and physical properties, modes of occurrence and uses of Mica.

**(1 × 10 = 10 Marks)**

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