

M.Sc Sem.-2 Examination

P - 407

Geology

June 2022

Time : 2-00 Hours]

[Max. Marks : 50

Attempt any three questions from section –I

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|---|------|---|------|
| 1 | (i) | Write a note on concepts of crystallography. | [14] |
| 2 | (i) | Hemimorphic and Tripyramidal class of tetragonal system. | [07] |
| | (ii) | Classes represented by 2 3 and 4. | [07] |
| 3 | (i) | Explain normal classes. | [14] |
| 4 | (i) | Apatite and nepheline types. | [07] |
| | (ii) | Rhombohedral hemimorphic and trirhombohedral class. | [07] |
| 5 | (i) | Discuss percussion figures and point groups in detail. | [14] |
| 6 | (i) | Crystal habit. | [07] |
| | (ii) | Twinning developed in orthorhombic and monoclinic crystals. | [07] |
| 7 | (i) | Write explanatory note on crystal projections. | [14] |
| 8 | (i) | X-ray crystal structure of KCl. | [07] |
| | (ii) | High performance instruments in crystallography. | [07] |

Section - II

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|---|-------------------------------------|--|------|
| 9 | Answer in short: (Any Eight) | | [08] |
| | (i) | Give full form of H. M. symbol. | |
| | (ii) | Define axial ratio. | |
| | (iii) | How many forms represented by isometric system? | |
| | (iv) | Define hemihedrism. | |
| | (v) | Give all possible forms of trigonal trapezohedron with indices. | |
| | (vi) | Give H. M. symbol for natrolite. | |
| | (vii) | What is space lattice? | |
| | (viii) | State types of Bravais lattices shown by orthorhombic system. | |
| | (ix) | Name the minerals showing zoning. | |
| | (x) | Give full form of SEM. | |
| | (xi) | What is Laue diffraction pattern? | |
| | (xii) | State the types of methods for X-ray crystal structure analysis. | |

