

B. Sc. First Year Science 2020-2021
PAPER-III: CRYSTALLOGRAPHY AND MINERALOGY

Time: 3 hrs

MM 50

UNIT-I

Fundamental Laws of Crystallography, Elements of crystal symmetry, Millers and Weiss systems of Notation. Crystal forms and their classification into crystal system.

UNIT-II

Study of holohedral classes of following crystal systems- Cubic system, Tetragonal system, Hexagonal system, Orthorhombic system, Monoclinic system and Triclinic system.

UNIT-III

Physical properties of minerals, Concept of isomorphism and polymorphism. Elementary ideas about structure and classification of silicate minerals. Study of physical properties of Quartz, Feldspar, Olivine, Pyroxene, Amphibole and Mica families.

UNIT-VI

Petrologic microscope and its construction; principles of optics as applied to orthoscopic study of minerals; color, form, birefringence, and pleochroism. Ideas about uniaxial and biaxial characters of minerals.

UNIT-V

Study of the optical properties of following rock forming mineral families: Olivine, pyroxene, amphibole, and nepheline. Study of optical properties in particular of following minerals: Muscovite, biotite, quartz, orthoclase, microcline, albite, olivine, augite, diopside, hypersthene, hornblende and tremolite.

Checked and Approved
(-sd)
(Dr. Maya Chaudhary)

Checked and Approved
(-sd)
Dr. Harish Kapasya

Checked and Approved
(-sd)
Mr. Subhash Janagal