

Paper-II: PETROLOGY

Time: 3 hrs

MM 50

UNIT-I

Introduction to Petrology. Igneous rocks: Forms, structures, textures and microstructures. Composition of magma, Classification of igneous rocks.

UNIT-II

Processes of differentiation, gaseous transfer within liquid; immiscibility, and assimilation. Description of the following rock forming families : granite - granodiorite, syenite, diorite, gabbro, feldspathoidal - syenite, ultrabasic and ultramafic rocks.

UNIT-III

Metamorphic rocks: Definitions, controls of metamorphism. Metamorphic processes and reactions. Types of metamorphism - contact, cataclastic, regional and ocean floor metamorphism.

UNIT-IV

Texture and structure of metamorphic rocks. Nomenclature and description of important metamorphic rocks. Metasomatism, anatexis, and migmatization. Sedimentary rocks: Processes of formation of sediments, diagenesis. Textures of sedimentary rocks.

UNIT-V

Major sedimentary structures - primary, secondary and biogenetic and their significance. Classification of sedimentary rocks. Type of arenites, carbonate rocks, and argillites.