

Paper–II: GEOEXPLORATION AND PRINCIPLES OF MINING

Time: 3 hrs

MM 50

UNIT–I

Geological techniques and procedures of exploration stages, planning and operation of exploration. Procedure for obtaining a mining lease.

UNIT–II

Geological aspects of drilling: drilling methods, selection of sites, angles and direction of bore holes. Core-logging.

UNIT–III

Methods of sampling, weighing of samples and calculation of average grades. Classification of ore reserves, calculation of cut-off grade. Grade and tonnage. Principles of geochemical and geophysical prospecting.

UNIT–IV

Mineral Economics and its concept, tenor, grade and specifications for important minerals used in industries. Methods of ore reserve estimation. Principles and methods of ore dressing.

UNIT–V

Introduction to remote sensing. Elements of mining methods: Introduction to open cast and underground mining methods.