

SEMESTER - I

PAPER- III (Code : Geol 03): MINERAL EXPLORATION AND MINING GEOLOGY

Time: 3 hrs

MM 100

UNIT-I

Exploration and Mining Geology: Outline of Growth and Development of Mining Geology. Gathering and presenting geological data including geologic mapping in underground mines. Ore search and guides. Drilling for geologic information, Planning of drill holes and logging of drill hole data.

UNIT- II

Sampling ore bodies and Estimation of ore reserves. Examination and evaluation of Prospect and mines. Role of Geologist in exploration and mining. Consulting Geologists.

UNIT-III

Exploration Geophysics: Fundamentals of geophysical prospecting, Methods and Application. Air borne and Ground geophysical surveys, Planning and coordinating geophysical work.

UNIT-IV

Exploration Geochemistry: Principles of geochemical prospecting. Exploration geochemistry sequence, Methods and application. Field and Laboratory analytical methods (Assaying methods.) Treatment of geochemical data.

UNIT-V

Ore Microscopy: Principles of Ore-Microscopy. Procedures of preparing polished sections, Etching. Scientific and industrial application of ore microscopy. Textures of ore minerals and paragenesis.

