

M. Sc. GEOLOGY THIRD SEMESTER

**Paper –I
301**

Mineral Resources

Code: Geol

Unit – I

Modern theories of ore deposition. Ore bearing fluids, movement of ore bearing fluids deposition of ores, sulphur and chloride complexes, deposition of Fe-O, Cu-S, Cu-Fe-System, Structures and textures of ores, wall rock alteration, controls of mineralization, classification of ore deposits, geothermometry and isotope studies

Unit –II

Deposits related to mafic igneous rocks, oceanic crust and intermediate to felsic intrusions Deposits related to sub aerial volcanism and submarine volcanism and sedimentation.

Unit –III

Deposits related to chemical sedimentation, clastic sedimentation, weathering, metamorphism and solution remobilization, MVT type. Metallogenic epochs and provinces, Plate tectonics and ore genesis.

Unit – IV

Study of the following metallic deposits in India with reference to their geographic and geologic distribution mode of occurrence and origin: iron, manganese, aluminum, chromium, gold, copper, lead, zinc and atomic minerals.

Unit – V

Study of the following minerals in India with reference to their geographic and geologic distribution, mode of occurrence, origin and uses: fertilizer minerals, refractory minerals, glass and ceramic minerals, abrasives, gemstones, cement, building stones, energy & fuel minerals: Coal and petroleum deposits: their distribution, classification, origin and potentialities; Important coal and petroleum fields of India.