

21GGE508T - MINERAL EXPLORATION ENGINEERING (ELECTIVE)										
Teaching Scheme					Examination Scheme					
L	T	P	C	Hours/Week	Theory			Practical		Total Marks
					MS	ES	IA	LW	LE/Viva	
3	0	0	3	3	25	50	25	-	-	100

Unit I

Hours: 10

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

Hours: 08

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

Hours: 12

Exploration Geophysics: Fundamentals of geophysical prospecting, Methods and Application. Air borne and Ground geophysical surveys, Planning and coordinating geophysical work. Exploration Geochemistry: Principles of geochemical prospecting. Exploration geochemistry sequence, Methods and application. Field and Laboratory analytical methods (Assaying methods.) Treatment of geochemical data.

Unit IV

Hours: 10

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.

MAX <40 Hrs>

TEXT / REFERENCE BOOKS

1. Geological methods in mineral exploration and mining by Roger W. Marjoribanks
2. Ore Deposit Geology and Its Influence on Mineral Exploration by Richard Edwards