

## **Discipline Specific Elective-1 Mineral Exploration and Mineral Economics**

### **Block-I Mineral Exploration-1**

Unit-1 Principles and strategies of mineral exploration

Unit-2 Geological exploration I- Physiographic and Mineralogical Guides

Unit-3 Geological exploration II - Stratigraphic, lithological and Structural guides

### **Block-II Mineral Exploration-2**

Unit-4 Geophysical Methods

Unit-5 Geochemical and Geobotanical Methods

Unit-6 Drilling Methods, sampling and estimation of ore deposits

### **Block-III Mineral Economics-1**

Unit-7 Principles of Mineral Economics

Unit-8 Methods of mineral dressing

Unit-9 Classification of Minerals: Essential, Strategic and Critical

### **Block-IV Mineral Economics-2**

Unit-10 National Mineral Policy

Unit-11 Conservation and Substitution

Unit-12 Growth of Mineral Industry- Mineral Legislation

### **DSE-1 Practicals- Mineral Exploration**

## **Block-I Exploration Methods**

Unit - 1 Geological Exploration methods

Unit - 2 Geochemical Exploration methods-contouring

Unit - 3 Geophysical Exploration Methods- 1 : Electrical Resistivity

Unit - 4 Geophysical Exploration Methods -2 : Gravity

## **Block - II: Estimation of Ore Reserves: I**

Unit - 5 Basic Concepts of ore reserve estimation

Unit - 6 Estimation of ore reserves - Uniform spacing of Samples - Square

Quadrant method of Samples - Extended and Included methods

Unit - 7 Estimation of ore reserves - Uniform spacing of Samples -  
Rectangular

Method of Samples - Extended and Included methods

Unit - 8 Estimation of ore reserves - Uniform spacing of Samples -  
Rectangular Polygon method