

M.Sc. (Geology)(with Credits)-Regular-Semester 2012 Sem IV (Old Course)  
**MSc2483-Geology Paper - III : Mining Geology and Mineral Exploration**

P. Pages : 2

Time : Three Hours



**GUG/S/18/5759**

Max. Marks : 80

- 
- Notes : 1. All questions are compulsory and carry equal marks.  
2. Draw neat sketches wherever necessary.

1. Discuss in detail about 'geotechnical investigations for mine planning'.

**OR**

Write short notes on:

- a) Stratigraphic guides.
- b) Duties of mining geologists.
- c) Intersecting loci and ringed targets.
- d) Lithologic guides.

2. Discuss in detail about the 'exploratory mining methods'.

**OR**

Write short notes on:

- a) Trenching
- b) Open cast and underground mining.
- c) Drilling methods used in mineral exploration.
- d) Stages of mineral exploration.

3. Discuss about the 'geochemical dispersion' by giving suitable example. Add note on statistical analysis and interpretation of geochemical data.

**OR**

Write short notes on:

- a) Path finder elements.
- b) Pedo-geochemical methods.
- c) Geochemical environments.
- d) Geo-botanical methods.

4. Discuss about principle, instrumentation, corrections and applications of gravity method.

**OR**

Write short notes on:

- a) Magnetic field survey.
- b) Aeromagnetic survey.
- c) Anomaly maps.
- d) Self-Potential method.

5. Write notes on:

- a) Dislocated ore bodies.
- b) Geological report writing.
- c) Evaluation of outcrop.
- d) Types of drill patterns.
- e) Geochemical exploration practices in glacial environment.
- f) Bio-geochemical survey.
- g) Scintillation counter.
- h) Resistivity meter.

\*\*\*\*\*