

2024
M.Sc.
Second Semester
 CORE – 07
GEOLOGY
Course Code: MGLC 2.31
 (Mineral Exploration & Mining Geology)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

UNIT-I

1. What are the key criteria used in prospecting for mineral deposits and how do they aid in the exploration process? 14
2. Write notes on the following: 7×2=14
 - (a) Regional geological mapping
 - (b) Drilling methods in exploration

UNIT-II

3. Explain in detail the basic principle of seismic wave reflection and refraction seismic method. Give a brief note on seismic data interpretation. 14
4. Write notes on *any two* of the following: 7×2=14
 - (a) Basic principle of gravity method of prospecting
 - (b) Seismic waves used in seismic survey and the behaviour of seismic waves in different rocks

UNIT-III

5. Explain the concept and principle of radioactive method of prospecting. 14
6. Elaborate the principle and application of magnetic method in mineral prospecting. 14

UNIT-IV

7. What are indicator plants and how are they useful in prospecting ore deposits? 14
8. Write notes on the following: 7×2=14
- (a) Soil survey
 - (b) Stream sediment survey

UNIT-V

9. Explain the various methods employed in surface mining. 14
10. Write notes on the following: 7×2=14
- (a) Shaft sinking
 - (b) Sublevel caving and block caving method of underground mining
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