

2022
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. Discuss the various criteria and guides to prospecting. 14
2. Explain the different methods of mapping in geological exploration. 14

UNIT-II

3. Explain seismic data acquisition and seismic data processing. 5+9=14
4. Write notes on the following: 7×2=14
 - (a) Seismic waves and the theory of elasticity (stress and strain)
 - (b) Basic principles of seismic wave reflection

UNIT-III

5. Explain the concept and principle of magnetic method. 14
6. Explain the concept and principle of radioactive methods of prospecting. 14

UNIT-IV

7. Discuss the significance of geobotanical method of prospecting. 14

8. Write notes on the following: 7×2=14
(a) Geochemical dispersion
(b) Principle of geochemical prospecting

UNIT-V

9. Discuss the different modes of surface mining. 14
10. Write notes on the following: 7×2=14
(a) Shaft sinking and drifting
(b) Top slicing and block caving
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