

**M.Sc. III Semester Degree Examination, April/May - 2024****APPLIED GEOLOGY****Exploration Geology****(NEP)**

Time : 3 Hours

Maximum Marks : 70

Note : Answer any five of the following questions with question No. 1 (Q1) Compulsory, each question carries equal marks.

1. Answer the following questions : **14**
 - (a) Discuss the geological criteria for mineral exploration.
 - (b) Explain the small and large scale geological maps, and discuss their importance in mineral exploration.
2. Add a note on : **14**
 - (a) Sampling methods used in mineral exploration
 - (b) Pits and underground trenches
3. Answer the following questions : **14**
 - (a) Discuss the anomalies observed in water and drainage sediments.
 - (b) Explain the concept of geochemical dispersion patterns.
4. Answer the following questions : **14**
 - (a) Describe the resistivity methods used in mineral exploration.
 - (b) Explain magnetic properties of rock and minerals.
5. Write a note on : **14**
 - (a) Ore reserve estimation
 - (b) Data evaluation in exploration
6. Answer the following questions : **14**
 - (a) Explain the geological prospecting methods.
 - (b) Explain the processes that control the mobility of elements in the surficial environment.
7. Answer the following questions : **14**
 - (a) Give a detailed account on geophysical anomalies.
 - (b) Explain the principles of reserve estimation of mineral deposits.
8. Write a short note on : **14**
 - (a) Trace elements
 - (b) Prospecting
 - (c) Exploration

