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**25-GE-41**

**M.Sc. IV SEMESTER [MAIN/ATKT] EXAMINATION  
MAY - JUNE 2025**

**GEOLOGY**

Paper - I

**[Mining and Mineral Dressing]**

*[Max. Marks : 75]*

*[Time : 3:00 Hrs.]*

*[Min. Marks : 26]*

**Note :** Candidate should write his/her Roll Number at the prescribed space on the question paper.  
Student should not write anything on question paper.  
Attempt all five questions. Each question carries an internal choice.  
Each question carries **15 marks**.

- Q. 1** Compare surface mining and underground mining methods in terms of their applicability, advantages, disadvantages and environmental impacts.

**OR**

Describe the various techniques used in placer mining and explain how they are suited to different types of placer deposits.

- Q. 2** Write short notes on the following –

- i) Hydraulic mining.
- ii) Panel System.
- iii) Seafloor Crawler Systems.

**OR**

Write short notes on the following –

- i) Strip Mining.
- ii) Room and Pillar Method.
- iii) Longwall Mining.

- Q. 3** Describe the various support systems used in mine and write their advantages and disadvantages.

**OR**

Write short notes on –

- i) Mines drainage.
- ii) Shaft sinking.
- iii) Mine ventilation systems.

**P.T.O.**

**Q. 4** Explain the primary, secondary and tertiary stages of crushing in mineral processing with examples.

**OR**

Describe the physical and chemical properties of Minerals and Rocks that influence the selection of ore dressing techniques.

**Q. 5** What is Gravity Concentration ? Discuss its working principle and common equipment used in gravity separation.

**OR**

Write short notes on –

- i) Agglomeration.
- ii) Beneficiation flow sheet of coal in India.
- iii) Beneficiation flow sheet for lead and zinc ores in India.

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