

Total No. of Questions : 8]

[Total No. of Printed Pages : 1

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**MI-504 (GS)**  
**B.E. V Semester Examination, June 2020**  
**Grading System (GS)**  
**Mineral Processing**  
**Time : Three Hours**

**Maximum Marks : 70**

- Note:** i) Attempt any five questions.  
ii) All questions carry equal marks.

1. With a neat diagram describe the construction and working of ball mills.
2. Discuss about gravity stamps and their classification and applications.
3. Define the term: Enrichment ratio, % recovery Ratio of concentration, optimum mesh of grind.

OR

Write notes on the following:

- a) Dewatering and drying
  - b) Electrostatic separator
4. Explain in brief what is the media of grinding in an Autogenous mill with its suitability to a particular type of Ore?

OR

Sketch and describe the following.

- a) HMS
  - b) Spiral concentrator
5. Write notes on following:
    - a) Economic justification of ore dressing
    - b) Main steps in ore dressing
    - c) Classification of rod mills
  6. Give a detailed comparison among Primary crusher, Secondary crusher and Tertiary crusher.
  7. A copper Ore of average grade of 6.5% is mined, milled, smelted and then refined. Following information is available:  
Processing Mill Recovery rate: 70%  
Loss in Smelting Process: 6kg/T of concentrate  
Loss in Refining Process: 3kg/T of Blister copper  
Find:
    - a) The grade of Mill concentrate,
    - b) The amount of refined copper obtained per Tonne of Ore.
  8. Write notes on any two of the following:
    - a) Dewatering and Drying.
    - b) Magnetic separator.
    - c) Coal washing.

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