

22375

22232

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Answer each next main Question on a new page.
  - (3) Illustrate your answers with neat sketches wherever necessary.
  - (4) Figures to the right indicate full marks.
  - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.

**Marks**

- 1. Attempt any FIVE of the following : 10**
- (a) Define :
    - (i) Hangwall
    - (ii) Footwall
  - (b) Define Ore drive.
  - (c) Define Grizzly.
  - (d) State various methods of drivage of raise.
  - (e) Explain support system in overhand stoping.
  - (f) Write purposes of boring.
  - (g) Explain various means and access to reach the ore body.
- 2. Attempt any THREE of the following : 12**
- (a) Explain deviation of bore hole. Explain any one method to measure deviation of bore hole.
  - (b) Explain shaft sinking. What are the various factor's which decides size and location of shaft ?
  - (c) Explain core recovery. Write procedure of core recovery.
  - (d) Explain Widening and Deeping of shaft.



- 3. Attempt any THREE of the following : 12**
- (a) Explain level interval. What are the factor's effects on level interval ?
  - (b) Explain underhand stoping method with neat sketch.
  - (c) State and explain various caving method.
  - (d) Explain "Permanent lining".
  - (e) Write applicability conditions for sublevel caving.
- 4. Attempt any THREE of the following : 12**
- (a) Explain shrinkage stoping method with neat sketch w.r.t. formation of stope, drilling, blasting & transportation of ore.
  - (b) Explain breast stoping method with neat sketch.
  - (c) Explain applicability conditions for VCR method.
  - (d) Write a note on "Walling Scaffold".
  - (e) Write purposes of ore bin & ore pass.
- 5. Attempt any TWO of the following : 12**
- (a) Compare overhand stoping method with underhand stoping method.
  - (b) Explain sublevel caving method with its applicability conditions, development, drilling, blasting.
  - (c) Justify cut & fill method is more advantages than sublevel method.
- 6. Attempt any TWO of the following : 12**
- (a) Explain unit operations involved in shaft sinking.
  - (b) Describe development of orebody using vertical shaft towards footwall side. Why ore drive should be kept in advance of haulage road now practice in development ?
  - (c) Explain screw feed mechanism of boring.
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