

22109

12425

03 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) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following :** **10**
- a) Write the fullform of following organisation –
 - i) IBM
 - ii) DGMS
 - b) Define –
 - i) Pillar
 - ii) Gallery
 - c) Define –
 - i) Air crossing
 - ii) Air lock
 - d) Write any two uses of mangnese.

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- e) State the ingredients of high explosive.
- f) Draw prop support with its dimensions.
- g) Define stripping ratio.

2. Attempt any THREE of the following : 12

- a) Enlist the types of entries to u/g mines and explain any one of them.
- b) Define terminology related to metal mining : Raise, Winze, Sill pillar and crown pillar
- c) Write role and function of CIMFR.
- d) Define firedamp, white damp, stink damp and black damp.

3. Attempt any THREE of the following : 12

- a) Elaborate the functions of DGMS in Indian mining.
- b) Describe the wedge cut pattern of drilling.
- c) Explain splitting and slicing during depillaring operation, with a neat sketch.
- d) Elaborate the various conditions which favours the adoption of surface mining.
- e) State various precautions while charging and firing of hole.

4. Attempt any THREE of the following : 12

- a) Describe the following terms with neat sketches :
 - i) Stope
 - ii) Level Interval
- b) Classify the different types of detonator.
- c) Explain powder factor and detonator factor.
- d) Describe the check/log support with neat sketch.

5. Attempt any TWO of the following :**12**

- a) Explain various methods of dipillaring in board and pillar mining method.
- b) Write the difference between prospecting and exploration.
- c) Elaborate the advantages and disadvantages of surface mining method.

6. Attempt any TWO of the following :**12**

- a) State and explain various types of metalliferous deposits.
 - b) Illustrate various bench parameter's of surface mine.
 - c) Draw a labeled sketch of Direct rope haulage and endless rope haulage.
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