Total No. of Questions :5]   [Total No. of Printed Pages :2

Roll No ....

MI - 604

B.E. VI Semester

Examination, June 2015

Underground Metal Mining Code

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each questions are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

1. a) Define the cutoff grade?
   b) Explain the cross cut in underground metal mine?
   c) Discuss the factors which affects the choice of mining methods?
   d) Discuss the following (With figures)
       i) Back   ii) Slot raises
       iii) Draw point   iv) Sub level

                    Or

   Explain the following (With diagrams)
       i) Winzes   ii) Finger raises
       iii) Spherical charge iv) Hanging wall

2. a) Define the ore pass?
   b) Explain the level interval?
   c) Discuss various type of mode of access for underground mine?
   d) Explain the Alimak type raise climber in detail?

                    Or

   Discuss the Jora raise lift method of raising with diagrams?

3. a) Explain the overhand stoping?
   b) Explain the underhand stoping?
   c) Discuss the Breast stoping?
   d) Explain the sublevel stoping method in detail along with diagram?

                    Or

   Discuss the Room and pillar method in detail along with diagram?

4. a) Discuss the applicability of shrinkage stoping?
   b) Define the square set Timbering.
   c) Discuss in brief Block caving method?
   d) Explain cut and fill method in detail along with diagram?

                    Or

   Discuss sub level caving method in detail along with diagram?

5. a) Define Back fill?
   b) Explain grouting in rock?
   c) Discuss the code of timbering rules in mines.
   d) Explain the expansion type rock bolt with diagram?

                    Or

   Discuss the cable bolting technique in detail along with diagram?

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