

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VII EXAMINATION – WINTER 2015**

**Subject Code: 172201****Date: 12/12/2015****Subject Name: Mine Planning****Time: 10:30am to 1:00pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What is mine planning? What are the components of mine planning? **07**  
(b) What is the role of planning in mining venture? **07**
- Q.2** (a) Draw a layout for a flat surface iron ore mine with an output of 5000 tonne/day. **07**  
Also provide the suitable shovel - dumper combination. Make suitable assumption where necessary.  
(b) How is cut-off grade decided in mining? **07**  
**OR**  
(b) Explain grade tonnage curve. **07**
- Q.3** (a) How is ore reserve estimated? **07**  
(b) Explain Taylor's mine life rule. **07**  
**OR**
- Q.3** (a) What is the role of bench geometry and mine layout? **07**  
(b) How is planning and scheduling of production done in mining? **07**
- Q.4** (a) How are mine losses determined? **07**  
(b) How is mine design optimized? **07**  
**OR**
- Q.4** (a) Give example of a feasibility report of a mine metallic mineral. **07**  
(b) Explain mine system and sub-system. **07**
- Q.5** Write note on any two : **14**  
1. Economic consideration in mine planning.  
2. Optimal size of mine.  
3. Haul road design.  
4. Pit configuration.

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