

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-III • EXAMINATION – WINTER • 2014****Subject Code: 132202****Date: 01-01-2015****Subject Name: Mine Development****Time: 02.30 pm - 05.00 pm****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) How is the blasting pattern in large tunnels? How muck is transported? **07**  
(b) What parameters are to be taken care before selecting site for shaft? **07**
- Q.2** (a) What are the methods of entering into a deposit for underground mining? **07**  
Explain any one.  
(b) What are merits and demerits of Incline system of transport? **07**
- OR**
- (b) What are the methods of vertical raise in mine? Explain any one. **07**
- Q.3** (a) Write about the drilling pattern in soft rocks. **07**  
(b) What are different shapes of tunnels? Give its advantages and disadvantages. **07**
- OR**
- Q.3** (a) What blasting patterns are carried out for drifting? **07**  
(b) Write a note on different type of tunnel boring machine. **07**
- Q.4** (a) Explain with sketch shaft centering arrangement in shaft sinking. **07**  
(b) Describe brief mining cycle for a shaft 6.0 m diameter sunk into a seam 250 m deep. **07**
- OR**
- Q.4** (a) Describe Load Haul Dump Machine. **07**  
(b) Describe the working procedure of Gathering Arm Loader **07**
- Q.5** Write Notes on any two:- **14**
1. Incline & Decline.
  2. Blasting pattern in shaft sinking.
  3. Raise climbers.
  4. Rocker Shovel.

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