

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-IV • EXAMINATION – WINTER 2013****Subject Code: 142202****Date: 23-12-2013****Subject Name: Basic Mine Surveying****Time: 02:30 pm to 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) What do you mean by miner's dial? Explain the method of Test and adjustment of Miner's Dial with neat sketch. **07**
- (b) What is Theodolite? Describe various uses of theodolite in mine surveying. Explain why a theodolite more accurate than other instruments. **07**
- Q.2** (a) What are the contour lines? Give uses of contour lines on mine plans. **07**
- (b) Define the follow terms: **07**  
(1) Mine survey (2) The line of Collimation (3) Closing error (4) Back sight  
(5) Levelling (6) Telescope inverted (7) A Level surface
- OR**
- (b) Write short notes on: (1) Ramsden Eye-piece (2) diagonal Eye-piece. **07**
- Q.3** (a) List out various methods are used for balancing the traverse? Explain any two in brief. **07**
- (b) Give Difference between Tubular and through compass. **07**
- OR**
- Q.3** (a) What is leveling? Give classification of leveling. Explain Any one. **07**
- (b) Describe the procedure of omitted measurements of traversing. **07**
- Q.4** (a) What do you mean by tacheometry? Describe the various methods of tacheometric survey. **07**
- (b) Which methods are used for contouring? Add a note on contouring on flat ground. **07**
- OR**
- Q.4** (a) Describe general procedure for field work with reference to tacheometric Survey. **07**
- (b) Define contour. Write down characteristics of contours with necessary sketches. **07**
- Q.5** (a) Write a short notes on: bowditch's rule. **07**
- (b) Write a note on Gyro – theodolite. **07**
- OR**
- Q.5** (a) Write a short note on shaft depth measurement by leveling with neat sketch. **07**
- (b) What is Triangulation method? What are the classifications of the triangulation survey? **07**

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