

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. Sem. – IV - Examination –June- 2011****Subject code: 142202****Subject Name: Basic Mine Surveying****Date:08/06/2011****Time: 10.30 am – 01.00 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) Describe various uses of theodolite in mine surveying. **07**
Explain why a theodolite more accurate than other instruments.
- (b) Explain the method of Test and adjustment of Miner's Dial. **07**

- Q.2** (a) Define the terms. **07**
(1) Easting (2) Northing (3) Departure (4) Closing error
(5) Independent co-ordinate (6) latitude (7) Face left.
- (b) Discuss various methods of interpolating the contours. **07**

OR

- (b) Give the characteristics and uses of contour lines on mine plans. **07**

- Q.3** (a) Describe the permanent adjustments of theodolite and explain how each of the adjustments is affected. **07**
- (b) Explain balancing of traverse by bowditch rule. **07**

OR

- Q.3** (a) Explain step by step procedure to measure horizontal angle with repetition method. **07**
- (b) Which methods are used for balancing the traverse? Explain any two. **07**

- Q.4** (a) Differentiate between Tubular and through compass. **07**
- (b) Staff interval of staff kept at 30m and 130m distance were observed 0.295 m and 1.295m respectively. Calculate constants of Tacheometer. **07**

OR

- Q.4** (a) Differentiate between dumpy level and Y-level. **07**
- (b) Explain the principle of tacheometry. **07**

- Q.5** (a) Explain reciprocal leveling with necessary sketch. **07**
- (b) Explain detail procedure for measuring depth of shaft. **07**

OR

- Q.5** (a) Draw a neat sketch of dumpy level and label all parts. **07**
- (b) Describe the procedure of tacheometry survey project you have done on field. **07**
