

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV • EXAMINATION – SUMMER • 2014****Subject Code: 142202****Date: 20-06-2014****Subject Name: Basic Mine Surveying****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) What do you mean by theodolite? Explain traversing with theodolite by different methods. **07**

(b) What are the various method of contouring? Add a note on: 'contouring on steep ground'. **07**

Q.2 (a) What is Miner`s dial? Explain its tests, adjustments and uses of it. **07**

(b) Differentiate between Tubular and through compass. **07**

OR

(b) Define the terms: (1) Transiting (2) Closing error (3) Face left (4) Northing (5) A Level surface (6) The axis of level tube (7) Centering. **07**

Q.3 (a) What is closing error? Write a note on bowditch`s rule. **07**

(b) Describe the procedure of omitted measurements of traversing. **07**

OR

Q.3 (a) Define leveling? What are the principle and object of leveling? **07**

(b) List out various methods are used for balancing the traverse? Explain any two in brief. **07**

Q.4 (a) Give the characteristics and uses of contour lines on mine plans. **07**

(b) Explain step by step procedure to measure horizontal angle with repetition method. **07**

OR

Q.4 (a) Define contouring. Write a note on contouring on flat ground. **07**

(b) Explain Shaft depth measurement employing a plumb wire. **07**

Q.5 (a) Give classification of leveling. Write a note on reciprocal leveling. **07**

(b) In levelling between two points P and Q on the opposite banks of a stream, the level set up close to P and the staff readings on P and Q were 1.425 and 2.045m respectively. The level was then moved and set up near Q. The readings on the staff at P and Q were 0.740 and 1.320m. find the true difference of level between P and Q. Also determine the reduced level of peg Q if that of P was 200.050m. **07**

OR

Q.5 (a) Define triangulation surveying. How the basic concept of it used in mine surveying. **07**

(b) What is tacheometric surveying? Explain general procedure for field work with reference to tacheometric Survey. **07**
