

Roll No.

Total No. of Pages : 2

Total No. of Questions : 09

B.Tech. (CE) (Sem.-3rd)

**SURVEYING**

Subject Code : BTCE-304 (2011 Batch)

Paper ID : [A1116]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

**SECTION-A**

1. Write briefly :
  - a. Why Base line is used in Geodetic Surveying?
  - b. List the various types of tapes.
  - c. Distinguish between a True Bearing and Magnetic Bearing.
  - d. Differentiate between point positioning and differential positioning.
  - e. Write the principle of Plane Tabling.
  - f. Write the expression for Transit Rule.
  - g. What is tangential tacheometry?
  - h. What is principle of Dumpy Level?
  - i. List the various types of curves.
  - j. Explain axis signal correction.

**SECTION-B**

2. The vertical angles to vanes fixed at 0.7 m and 3.8m above the foot of the staff held vertically at a point were  $-0^{\circ}30'$  and  $+1^{\circ}12'$  respectively. Find the horizontal distance and RL of the point if the level of instrument axis is 124.650m above datum.
3. Explain the different corrections to base line measurements.
4. What are the requirements for fixing the stations in the survey area?
5. What is meant by reduction to centre and derive an expression for it?
6. Explain the method of setting out a curve by radial offsets from tangents. Derive the necessary formula.

**SECTION-C**

7. What are latitudes and departures? How will you balance a closed traverse? What are the checks for closed and unclosed traverses?.
8. Explain the Two Point Problem in Plane Tabling.
9. Explain any four permanent adjustments of a theodolite.