Roll No. ☐☐☐☐☐☐☐☐☐☐☐  Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(CE)  (Sem.–4)
## SURVEY-II
Subject Code : CE-202
Paper ID : [A0606]

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 have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

### SECTION-A

1. **Write briefly :**

   a) Explain the principle of GIS.

   b) Write the expression for Bowditch's Rule.

   c) Differentiate between temporary and permanent adjustments.

   d) Write the principle of theodolite traversing.

   e) Why Base line is used in Geodetic Surveying?

   f) Explain the principle of tacheometric survey.

   g) How the stations are fixed in Geodetic Surveying?

   h) Discuss the requirements of a well conditioned triangle.

   i) Explain axis signal correction.

   j) What is meant by satellite station?

## SECTION-B

2. Explain the method of setting out a curve by radial offsets from tangents. Derive the necessary formula.

3. What are latitudes and departures? How will you balance a closed traverse? What are the checks for closed and unclosed traverses?

4. The vertical angles to vanes fixed at 0.5 m and 3.5 m above the foot of the staff held, vertically at a point were –0°30' and +1°12' respectively. Find the horizontal distance and RL of the point if the level of instrument axis is 126.450 m above datum.

5. What is meant by reduction to centre and derive an expression for it?

6. Describe briefly different types of remote sensing techniques.

## SECTION-C

7. A compound railway curve ABC is to have the radius of arc AB as 600 m and that of BC 400 m. Angle of intersection at the intersection point V is 35.1f the arc AB is to have length of 200 m, calculate distances VA and VC.

8. Explain the different correction to base line measurements.

9. Explain any four permanent adjustments of a theodolite.