SURVEYING AND GEOMATICS LAB

Course Code: 22CE1102

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Course Outcomes:

At the end of the course the student will able to:

CO1: Calculate the bearings of lines with a prismatic compass for open and closed traverses (L3)

CO2: Determine the level differences between different stations by dumpy level and prepare contour maps (L3)

CO3: Calculate heights and distances using trigonometric surveying (L3)

CO4: Demonstrate the setting of simple and compound curves (L3)

CO5: Demonstrate the Total Station and its operation (L3)

(Any 12 out of 14 experiments)

LIST OF EXPERIMENTS:

1. Determination of distance between two inaccessible points using compass.

2. Closed Traversing by compass & graphical adjustment.

3. Measurement of elevation difference between two points using Dumpy level by Height of Instrument and Rise and Fall method

4. Determination of Longitudinal Section and Cross sections of a given road profile.

5. Contouring of a small area by method of blocks / grids.

6. Determination of horizontal angle by repetition and reiteration method using theodolite.

7. Determination of a given Tower/ Building height with base is accessible and inaccessible.

8. One Exercise on Curve setting.

9. Determination of area using Total Station.

10. Traversing and contouring using Total Station.

11. Determination of remote height using Total Station.

12. Stake out using Total Station.

13. Feature tracking and plotting using GPS

14. Topographic Survey using GPS

References:

1. Arora K R, *Surveying (Vol 1, 2 & 3)*, 9th Edition, Standard Book House, Delhi, 2018.
2. Chandra A M., *Plane Surveying*, 3rd Edition, New Age International Pvt. Ltd., Publishers, New Delhi, 2015.