

## SURVEYING USING TOTAL STATION

(Skill Oriented Lab Elective - II)

**Course Code: 20CE11S5**

L	T	P	C
0	1	2	2

**Pre-requisites:** Surveying and Geomatics, Surveying and Geomatics Lab

### Course Outcomes

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

**CO1:** Determine coordinates for given location (L3)

**CO2:** Calculate the area of a given land (L3)

**CO3:** Display contour map of a given area (L2)

**CO4:** Transfer the data from total station to computer (L2)

**CO5:** Perform the survey of existing road alignment/Intersection (L2)

**(Any 12 out of 16 experiments)**

### LIST OF EXPERIMENTS:

1. Determination of coordinates for given location.
2. Determination of area using total station by coordinates.
3. Measurement of horizontal angle using total station by Repetition method.
4. Measurement of horizontal angle using total station by Reiteration method.
5. Traversing using total station.
6. Measurement of Remote Height using total station.
7. Developing Contour Map for given area.
8. Locating given points by Stake-out.
9. Data transfer from total station to computer.
10. Longitudinal section of existing road using total stations.
11. Cross section of existing road using total stations.
12. Marking boundary points of site for a new road.
13. Surveying an existing junction / Intersection using total station.
14. Column marking using total station.
15. Prepare Drainage map for given site.
16. Determination of distance and difference in elevation between two inaccessible points using total station.

### Reference:

1. B.C. Punmia, Surveying Volume 3, 16<sup>th</sup> Edition, Laxmi Publications (P) Ltd., 2016.
2. <https://theconstructor.org/surveying/total-station-operation-uses-advantage/6605/>, Accessed on 14 December 2017.
3. <http://www.gisresources.com/total-station-and-its-applications-in-surveying/>, Accessed on 14 December 2017.