

SURVEYING FIELD WORK - I

Practical : 3 Periods/Week

Sessional marks : 40

Semester End Exam: 3 Hrs.

Semester End Exam. marks : 60

Credits : 2

Course objectives:

- To chaining of a line using tape and chain and recording of details along the chain line.
- To measure the area of irregular boundaries.
- To prepare a plan of residential building by making use of a chain.
- To find the included angles and local attraction of traverse by using compass surveying.
- To determine the distance between two inaccessible points by using different surveying instruments.
- To measure the elevation difference between Points at short measured intervals along a fixed line.
- To determine the elevation difference between two points-based by reciprocal leveling method.
- To prepare a contouring of a small area by method of blocks
- To plotting of a building by using plane table surveying
- To measure the horizontal and vertical angles of various points by theodolite.

Course outcomes:

By the end of the course the students will be able to

- To prepare the plan or map showing the ground features from the data obtained by surveying.
- To analyze and compute traverse adjustment and section break downs.
- To perform basic field surveys.
- To convert field data to record data in the form of drawings, sketches and field book files.
- To know about the how to take the levels of existing ground.

Any 10 of the following:

I) Chain & Compass Survey

1. Measurement of area – Cross staff survey
2. Traversing by compass and graphical adjustment.
3. Plotting of an area using Chain/Compass.

II) Simple Leveling

4. Measurement of elevation difference between two points using any leveling Instrument (Fly Leveling)
5. Elevation difference between two points by Reciprocal leveling method.
6. Profile Leveling – Plotting of Profile.
7. Contouring of a small area by method of Blocks/Tacheometric Survey.

III) Plane Table Survey

8. Determination of the distance between two inaccessible points.
9. Plotting of a building by plane table Traversing
10. Resection methods.

IV) Theodolite

11. Measurement of horizontal and vertical angles.
12. Determination of distance between two inaccessible points

WEB REFERENCES:

<http://nptel.iitm.ac.in/courses/Webcourse-contents/IIT-ROORKEE/SURVEYING/home.htm>

<http://www.engineeringcivil.com/theory/surveying/>

<http://www.engineeringcivil.com/theory/civil-engineering-notes-from-universities/>