

Practical No: 19 Prepare plans and locate details using Intersection Method.

I. Practical Significance:

When the survey work is to be completed within available time & field situations are very difficult for chaining then this method of plane table is significant. When chaining is difficult, intersection method of plane tabling is significant. The knowledge of locating inaccessible points/stations is necessary. The plane table surveying is the fast method of surveying. In plane table surveying plotting of the plan and field observations can be done simultaneously. When chaining work has to reduce then intersection method of plane tabling is used.

II. Industry/Employer expected outcome(s):

- Prepare plan by plane table survey with present field situation.

III. Course Level Learning Outcome (COs):

- CO 5- Prepare the plan using Plane Table Surveying to locate relevant details.

IV. Laboratory Learning Outcome (LLO):

- LLO 19.1 Use plane table survey to prepare plan and locate details by using Intersection Method.

V. Relevant Affective Domain related Outcome(s):

- Using Safe behaviors effectively.
- Maintain high standards of hygiene.
- Efficient application of tools, equipment's and machinery.
- Professional and ethical standards.

VI. Relevant Theoretical Background:

Parallelism is the principle of plane table survey. Information of all the accessories of plane table with their use is necessary. Similarly different methods of plane tabling with their suitability under different field situation must be known. Intersection method is generally adopted to locate inaccessible points/stations, horizontal distance between the points on different banks of river, points separated by deep valleys, etc. are to be determined.

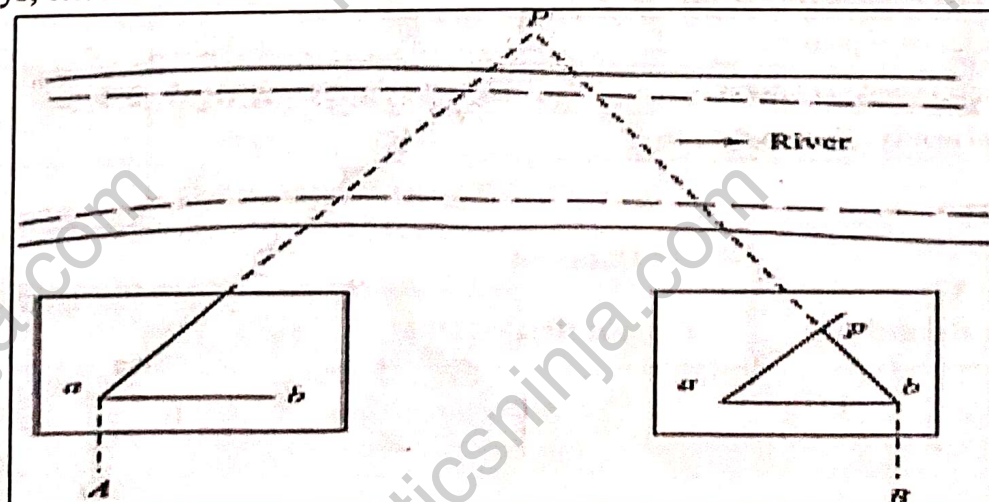


Figure No. 19.1 Intersection method of Plane Table Survey

X. Results:

- Polygon plotted drawing sheet.

XI. Interpretation of results:

polygon plotted drawing sheet.

XII. Conclusions:

prepare plans and locate details using intersection method.

XIII. Practical Related Questions:

1. State method of orientation adopted while locating objects by method of intersection.
2. Mention differences between telescopic alidade & plane alidade.
3. State the precaution to be taken in intersection method of plane tabling.

Space for Answer

Q. 1) —→ ?

Ans:- the orientation method adopted by locating an object through intersection in the context of plane table surveying is resection this method also known as the two point problems is used to orient the plane table and locate its station

Q. 3) —→ ?

Ans:- Maintaining proper orientations of the plane table at each station.

Q. 2) \longrightarrow ?

Ans-

telescope:- a small telescope is mounted on alidade allowing for more precise sighting longer distances

sighting device:- instead of a telescope, it uses a vane with a slit or a thin wire for sighting

- Accuracy:- the telescope increases the accuracy of line of sight and allows for the measurement of inclined sights.

- Accuracy:- less precise than a telescope Alidade specially at longer distance.

- Components A straight edge (ruler) with two vanes or a slit for sighting.

XIV. Assessment Scheme

Sr. No.	Performance Indicators	Weightage	Marks Obtained
A.	Process Related (15 marks)	60%	
1.	Handling of equipment's & Survey Conduction	40%	
2.	Accuracy in length measurement.	20%	
B.	Product Related (10 marks)	40%	
3.	Conclusion of practical	20%	
4.	Practical Question Answer	20%	