



Department Civil Engineering

Vision: “To impart quality technical education beneficial to industry and the society in the field of Civil Engineering.”.

- **Mission:**
 - To arrange academic and technical expertise.
 - To improve the practical knowledge of the student as per current scenario of industry.
 - To make the students socially and ethically responsible.

Assignment No :- 01

Date :-

Topic Name :- Tacheometric Surveying

- Define tacheometry. State principle of Tachometer with sketch.
- Write difference between Theodolite and Tacheometer.
- Describe essential characteristics of a tacheometer.
- State any four situations where tacheometry is preferred.
- State essential requirements of tachometer.
- Explain the principle of stadia method.
- Explain in brief fixed hair method.
- State the constant of tacheometry.
- A tacheometer was set up at a station “C” and following readings were taken on a staff held vertically.

Station	Staff Station	Vertical angle	Stadia hair readings	Remark
C	BM	+9°31'	0.950, 1.055, 1.160	RL of Big
C	E	−3°0'	1.050, 1.105, 1.160	= 400 M

The constants of tacheometer were 100 and 0.4 respectively. Determine the distance “CE” and RL at “E”.

- The following observations were made by tacheometer. Find the tacheometric constants. Consider, line of sight is horizontal and staff held vertical.

Distance (m)	25m	50m
Stadia readings (m)	1.900, 1.655, 1.410	2.220, 1.750, 1.230

Date of Submission :- Within the one week after completion of the chapter.

Assign By :- Mrs. Trupti Deshmukh



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Assignment No :- 02

Date :

Topic Name :- Curves Setting

- a) What are the different types of curve.
 - b) Define degree of curve.
 - c) Draw a neat sketch of simple curve showing all elements.
 - d) State the methods of setting out curves.
 - e) Calculate the ordinates from long chord to set out a simple circular curve at 5 m interval of radius 250 m and a long chord length of 80 m. Justify your answer with neat sketch.
 - f) Two straights of road deflect at an angle of intersection 120° . They are to be connected by a circular curve of 200 m radius calculate :
 - i) Length of tangent ii) Apex distance iii) Length of long chord iv) Length of curve.
 - g) Calculate the ordinates at every 12m interval to set out a simple circular curve having long chord of 120m & radius of 200m. Illustrate your answer with neat sketch.
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Assignment No :- 03

Date :

Topic Name : Advanced Surveying Equipments

- a) List modern surveying instruments .
 - b) Give classification of EDM instruments.
 - c) State the principle of EDM with sketch.
 - d) State uses of EDM.
 - e) State components parts of digital theodolite & state their purpose.
 - f) State feature of digital theodolite.
 - g) Describe to use of digital theodolite for measurement of horizontal & vertical angle.
 - h) State the advantages of Total station.
 - i) State special features of total station.
-

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Assignment No :- 04

Date :

Topic Name :- Remote Sensing ,GPS & GIS

a) Define is remote sensing.

b) Define passive & active systems.

c) State applications of remote sensing.

d) What is GPS? State the advantage & disadvantage of GPS.

e) What is GIS? State the advantage & disadvantage of GIS.

f) State the components of GIS.

g) Write applications of GIS.

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Assignment No :- 05

Date :-

Topic Name :- Aerial Surveying and Photogrammetry.

- a) Define Aerial Surveying & principle of Aerial Surveying
 - b) State the uses of Aerial surveying in civil engineering.
 - c) Explain classification of Drones.
 - d) State the objects of Aerial photogrammetry.
 - e) Describe the types of photogrammetry.
 - f) Describe the various types of aerial photograph.
 - g) State the Merits & demerits of photogrammetry surveying.
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