



Department Civil Engineering

MODULE TEST NO 1

Topic Name :- Tacheometric Surveying

- a) Define tacheometry. State principle of Tachometer with sketch.
- b) Write difference between Theodolite and Tacheometer.
- c) Describe essential characteristics of a tacheometer.
- d) State any four situations where tacheometry is preferred.
- e) 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”.

- f) 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



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MODULE TEST NO 2

Topic Name :- Curves Setting

- a) What are the different types of curve.
 - b) Draw a neat sketch of simple curve showing all elements.
 - c) State the methods of setting out curves.
 - d) 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.
 - e) 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.
 - f) 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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MODULE TEST NO 3

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 feature of digital theodolite.
 - f) Describe to use of digital theodolite for measurement of horizontal & vertical angle.
 - g) State the advantages of Total station.
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MODULE TEST NO 4

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 GIS? State the advantage & disadvantage of GIS.
 - e) State the components of GIS.
 - f) Write applications of GIS.
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MODULE TEST NO 5

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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