

COLLEGE OF TECHNOLOGY AND ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING 3 YEAR BE I SEMESTER SESSION 2015-16

- 1. Course Code : CE 314
- 2. Course Title
- : SURVEYING II

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- 3. Credit : 4(3+1)
- 4. Theory Lecture Outlines

1.	Contour & Contouring: Definition of contour, contour internal
2.	Contour & Contouring: Definition of contour, contour internal
3.	Contour & Contouring: Definition of contour, contour internal
4.	choice of contour internal, characteristics of contour
5.	Method of locating contours by square method
6.	cross sections & tacheometric method
7.	Interpolation of contours
8.	Use of contour maps.
9.	Computation of Volumes: Volume of reservoir from contour map Volume
	from spot levels & contour plans
10.	Computation of Volumes: Volume of reservoir from contour map Volume
	from spot levels & contour plans
11.	Earthwork calculations, Level, two level & side hill two level section,
12.	Tacheometry: Principle of tacheometric survey & its field application
13.	Stadia method
14.	constants of tacheometer
15.	constants of tacheometer
16.	distance & elevation formulae for staff held vertical & normal
17.	Reduction tables Use of anallactic lens
18.	Errors and precision of tacheometry
19.	Errors and precision of tacheometry
20.	Circular Curves : Necessity of curves
21.	classification of curves (Simple, compound, reverse & vertical curves)
22.	Elements of simple circular curve(definition & notation, designation of curve)
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 23. Elements of simple circular curve(definition & notation, designation curve) 24. setting out of simple circular curve by ordination from the long chord successive bisection of arc 25. setting out of simple circular curve by ordination from the long chord successive bisection of arc 26. offsets from the tangents & by two theodolite method 27. <i>Transition Curve:</i> General requirement of super elevation 28. ideal transition curve. Length of transition curve 	by
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27. <i>Transition Curve:</i> General requirement of super elevation	
28 ideal transition curve I enoth of transition curve	
28. Ideal transition curve. Length of transition curve	
29. Methods of setting out a transition curve	
30. <i>Trigonometrical Leveling:</i> Determination of differences of elevations	
31. base of the object accessible	
32. base of the object accessible	
33. base of the object inaccessible axis at the same level & at different level	
34. base of the object inaccessible axis at the same level & at different level	
35. base of the object inaccessible axis at the same level & at different level	
36. <i>Ariel Photography:</i> Introduction to Ariel Photography.	
37. <i>Ariel Photography:</i> Introduction to Ariel Photography.	
38. <i>Ariel Photography:</i> Introduction to Ariel Photography.	
39. <i>Field Astronomy:</i> Definitions and basic concepts of Field Astronomy	
40. <i>Field Astronomy:</i> Definitions and basic concepts of Field Astronomy	
41. Numericals	
42. Numericals	
43. Revision	
44. Revision	
45. Revision	

Suggested Books & References

- 1. Arora K. R. 'Surveying', Volume I & II.
- 2. Punmia B.C. 'Surveying', Vol. I & II.
- 3. Clendinning and Oliver, 'Principles and use of surveying instruments'.

(**Dr. B.S. Singvi**) Prof.& Head (Civil Engg)