

II B.Tech I Semester (R07) Supplementary May 2012 Examinations
SURVEYING
(Civil Engineering)

Time: 3 hours

Max. Marks: 80

Answer any FIVE questions
All questions carry equal marks

1. (a) Describe different types of chains and tapes commonly used in surveying stating the advantages of each.
(b) Describe in detail how you would range and chain a line between two points which are not intervisible because of an intervening hillock.
2. (a) Explain the terms: Check line, Base line, Tie line, and oblique offset.
(b) Find the maximum length of offset so that the displacement on paper from both sources of error does not exceed 0.2 mm given that the offset is measured with an accuracy of 1 in 25 and the scale is 1 cm = 50 m.

3. The following observations were made during the testing of a dumpy level: instrument at staff reading on

	A	B
A	1.702	2.244
B	2.146	3.044

Distance AB=150 m is the instrument in adjustment. To what reading should the line of collimation be adjusted when the instrument was at B? if the R.L of A= 432.052 what should be the R.L of B.

4. (a) State and explain the sinpsons rule.
(b) How does it compare with other rules?
5. (a) What do you understand by 'Temporary Adjustment'? Describe in brief the various temporary adjustment of a Theodolite.
(b) Discuss the procedure of measuring a horizontal angle with a theodolite.
6. (a) How will you find the constants of a tachometer?
(b) What is an analytical lens? Establish the basic equation for an anallactic lens.
7. (a) Why are the curves provided? Explain different types of curves with neat sketches.
(b) Two straights intersect at a chainage of 3500. 5 m with an angle of intersection of 156° . These two straights are to be connected by a simple circular curve of 200 m radius. Calculate the data necessary by the method of offsets from the chords produced with a peg interval of 20 m. Explain the procedure to set out the curve.
8. (a) What is Geodetic surveying? How it is different from plane surveying?
(b) Explain the importance of electronic surveying in the field of surveying.
