

BTS(C) – III – 08 – 063 – E

B.Tech. Degree III Semester Examination, November 2008**CE 302 SURVEYING I**

(2006 Scheme)

Time: 3 Hours

Maximum Marks: 100

(8 x 5 = 40)

PART A

(Answer All questions)

- I
- Explain Tie Line and Check Line in chain survey.
 - Differentiate Whole Circle System and Quadrantal System of measuring bearings.
 - Explain the various uses of contours.
 - Briefly explain the different types of errors in leveling.
 - With the help of a neat sketch explain the working of Planimeter.
 - Compare Simpson's rule and Trapezoidal rule.
 - Briefly explain the working of a Subtense Bar.
 - Differentiate method of repetition and reiteration.

PART B

(4 x 15 = 60)

- II
- Explain any one method of solving the 3 – point problem. (8)
 - Briefly explain the errors in Chain Survey. (7)

OR

- III
- Given below are the observed bearings in a traverse survey conducted with a prismatic compass at a place where local attraction is suspected.

<u>Line</u>	<u>Fore Bearing</u>	<u>Back Bearing</u>
AB	46°10'	226°10'
BC	119°20'	298°40'
CD	169°30'	351°10'
DA	280°20'	99°20'

At what station do you suspect local attraction. Find the correct bearings of the lines. (15)

- IV
- The following consecutive readings were taken with a dumpy level:
0.894, 1.643, 2.896, 3.016, 0.954, 0.692, 0.582, 0.251, 1.532, 0.996, 2.135
The instrument was shifted after the fourth and eighth readings. The first reading was taken on the staff held on the B.M of R.L 820.765. Rule out a page of a level field book and enter the above readings. Calculate the reduced level of the points with the usual check. (15)

OR

- V
- Briefly explain how profile leveling and cross sectioning are done. (9)
 - Explain the characteristics of contours. (6)

- VI
- A road embankment 8m wide at formation level, with side slopes 2 to 1 and an average height of bank 3m is constructed with an average gradient of 1 in 30 from a 399m contour to 410m contour. Find the length of the road in Km and the quantity of earth work in cubic metre for the embankment. (15)

OR

- VII
- How do you work out the area by using departure and total latitude method? (8)
 - Explain the working of Indian Pattern Clinometer. (7)

- VIII
- How do you adjust the closing error in a theodolite traverse? Explain in detail. (15)

OR

- IX
- How do you determine the tacheometric constants? (8)
 - Compare and contrast the tangential and stadia system of tacheometry. (7)

