

4E2035

Roll No. : _____

Total Printed Pages : 3

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B. Tech. (Sem. IV) (Main/Back) Examination, June/July - 2011
 Civil Engg.
 4CE4 Surveying-I

Time : 3 Hours]

[Total Marks : 80

[Min. Passing Marks : 24

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.

Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination.
 (Mentioned in form No. 205)

1. _____ Nil _____ 2. _____ Nil _____

UNIT - I

- 1 (a) What is surveying ? Explain its importance in Civil engineering. 8
- (b) What are the fundamental principles upon which the various methods of surveying is based ? Explain how will you fix a point C in the field in relation to two points 'B' and 'C' already fixed in the field. 8
- 2 (a) Describe different types of tapes commonly used in surveying. Discuss the advantages of each. 8
- (b) Discuss various sources of errors in tape measurements. Discuss various tape corrections. 8

UNIT - II

- 3 (a) What do you mean by meridian ? Differentiate between True and Magnetic meridian. 6

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[Contd...

8 (c) What are the sources of errors in levelling ? What precautions are necessary to avoid them ?

8

(b) The following readings were taken with a level and 4 m staff. Draw up a level book page and reduce the level by the height of instrument method :

0.683 BM [51.362 m], 1.109, 1.838, 3.399, (3.877 and 0.451)
CP, 1.405, 1.896, 2.676, 3.478, (3.999 and 1.834)CP, 0.649,
1.706.

UNIT - V

9 (a) Explain the principle of plane tabling.

6

(b) What is resection ? Describe any two methods of resection.

10

10 (a) What do you understand by contour interval and on what factor does it depend ? Draw neat sketches of (i) valley (ii) pond.

6

(b) Discuss characteristics of contour with suitable sketches. Differentiate between direct and indirect methods of contouring. Discuss uses of contour.

6