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09ENG2.6

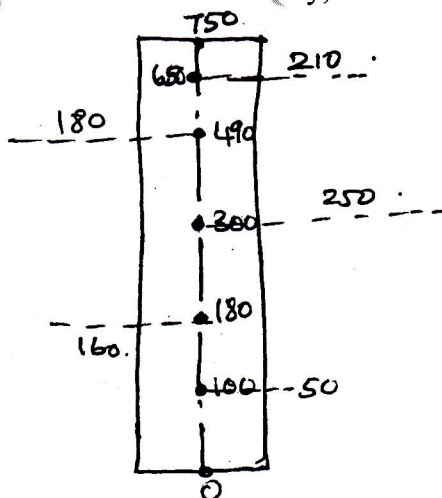
Second Semester B.Arch. Degree Examination, June/July 2014
Surveying and Levelling

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions.
2. Assume missing data.
3. Write neat sketches wherever necessary.

1. a. Discuss in detail the classification of survey. (10 Marks)
b. Explain the fundamental principles of surveying. (04 Marks)
c. A 20 mt chain was found to be 10 cms too long after chaining a distance of 1500mts. It was found to be 18cms too long at end of day's work after chaining a distance of 2900 mts. If the chain was correct before the start for work, find correct distance. (06 Marks)
2. a. What are different types of chains commonly used? (10 Marks)
b. Explain 5 different corrections to tape applied in base line measurement. (10 Marks)
3. a. Explain 4 different methods of measuring horizontal distance on sloping ground. (08 Marks)
b. With help of neat sketch explain working of optical square. (07 Marks)
c. How to overcome the "OBSTACLES TO CHAINING" if it is possible to chain around the obstacle (any 2 methods). (05 Marks)
4. a. With help of neat sketch explain "RECIPROCAL RANGING". (08 Marks)
b. What is "SHRUNK SCALE"? (03 Marks)
c. Following details are obtained from cross staff survey, calculate the area of field. (09 Marks)



5. a. Explain different methods of plane tabling. (10 Marks)
b. List and explain advantages and disadvantages of plane table surveying. (10 Marks)
6. a. With neat sketch, explain the method to measure horizontal angle by "Method of Reiteration". (10 Marks)
b. Explain the "Temporary adjustments" made in theodolite. (06 Marks)
c. Briefly explain face left and face right observations. (04 Marks)

7 a. Explain:

- i) Differential leveling.
- ii) Profile leveling and cross sectioning.
- iii) Reciprocal levelling.

(10 Marks)

b. Following staff readings were observed successively with a level. The instrument was shifted after 3rd, 6th and 8th reading.

Enter the readings in a level book, and calculate the RC's of points if RL of bench mark is 432.384 mts.

2.228, 1.606, 0.988, 2.090, 2.864, 1.262, 0.602, 1.982, 1.044, 2.684. (10 Marks)

8 a. Explain in detail the characteristics of contour. (08 Marks)

b. Differentiate between direct and indirect contouring. (08 Marks)

c. Explain briefly four uses of contour. (04 Marks)

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