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**Second Semester B.Arch. Degree Examination, June/July 2016**  
**Site Surveying & Analysis**

Time: 3 hrs.

Max. Marks:100

**Note: 1. Answer FIVE full questions, selecting at least ONE question from each module.**  
**2. Missing data if any, may be suitably assumed and clearly stated.**

**Module – 1**

- 1 a. Discuss the classification of surveying based on,  
 i) Purpose  
 ii) Nature of the field. (10 Marks)  
 b. Explain with neat sketch, what is reciprocal ranging. (10 Marks)
- 2 a. Explain the different methods of chaining on sloping ground. What is hypotenusal allowance? (10 Marks)  
 b. A tape 20 m long of standard length at 84°F was used to measure a line, the mean temperature during measurement being 65°. The measured distance was 882.10 m, the following being the slopes:  
 2°10' for 100 m  
 4°12' for 150 m  
 1°6' for 50 m  
 7°48' for 200 m  
 3°0' for 300 m  
 5°10' for 82.10 m  
 Find the true length of the line if the coefficient of expansion is  $65 \times 10^{-7}$  per 1°F. (10 Marks)

**Module – 2**

- 3 a. What factors should be considered in deciding the survey line or stations of a chain survey? (05 Marks)  
 b. Explain, with neat diagram the construction and working of optical square. (05 Marks)  
 c. What is two point problem? How is it solved? (10 Marks)
- 4 a. Describe briefly the temporary adjustments of a dumpy level. (10 Marks)  
 b. The following staff readings were observed successively with a level, the instrument having been shifted after third, sixth and eighth reading 2.228, 1.606, 0.988, 2.090, 2.864, 1.262, 0.602, 1.982, 1.044, 2.684 m  
 Enter the above readings in a page of a level book and calculate the R.L. of the points if the first reading was taken with a staff held on a bench mark of 432.384 m. (10 Marks)

**Module – 3**

- 5 a. Describe various methods of contouring. (10 Marks)  
 b. Describe with the help of sketches the characteristics of contours. (10 Marks)

- 6 a. Explain with neat sketch the essential parts of a transit theodolite. (10 Marks)  
b. What is a total station? List the various advantages of using total stations in place of conventional instruments for surveying. (10 Marks)

Module – 4

- 7 a. Explain the method of survey without instruments using one's own body. (10 Marks)  
b. Explain the method of aerial photogrammetry. (10 Marks)
- 8 Explain the various factors involved in the analysis of site. (20 Marks)

Module – 5

- 9 a. What are the various details to be indicated in survey drawings? (10 Marks)  
b. What are the conventional signs used to denote the following:  
i) Road      ii) North      iii) Bench Mark      iv) Bridge      v) Canal with lock. (10 Marks)
- 10 Explain the steps involved in setting out for a rectangular structure. (20 Marks)

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