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14ENG2.7

**Second Semester B.Arch. Degree Examination, Dec.2017/Jan.2018**

**Site Surveying and Analysis**

Time: 3 hrs.

Max. Marks:100

**Note: 1. Answer any FIVE full questions selecting ONE question from each module.  
2. Answer all questions on drawing sheets only.**

**MODULE - 1**

- 1 a. What is Surveying? Discuss with sketches the fundamental principles of surveying. (10 Marks)
- b. Explain the classification of Surveying. (10 Marks)
- 2 a. Explain the following terms - i) Survey station ii) Base line iii) Tie line iv) Check line v) Oblique offset. (10 Marks)
- b. The area of a land of an old survey plotted to a scale of 1:100 now measures 100.5cm<sup>2</sup>. The plan has shrunk so that a line originally 10cm long now measures 9.5cms. Find the true area of the land. (10 Marks)

**MODULE - 2**

- 3 a. Explain different methods to erect a perpendicular to a chain line from a point on it. (10 Marks)
- b. What are the different accessories used in plane table surveying? (10 Marks)

OR

- 4 a. Explain the following terms in levelling - i) Datum surface ii) Line of Collimation iii) Bench Mark iv) Elevation v) Foresight. (10 Marks)
- b. The following staff readings were recorded in a leveling operation : 1.185 , 2.604 , 1.925 , 2.305 , 1.155 , 0.864 , 1.105 , 1.685 , 1.215 , 1.545 , 0.605. Station A is BM of RL 185.685m. Find RL's of all the points by rise and fall method only. The first reading was to point A and the instrument was shifted after the reading 2.604 , 0.864 and 1.215. (10 Marks)

**MODULE - 3**

- 5 a. What is Contour Interval? What are the factors to be considered while selecting contour interval? (10 Marks)
- b. Explain with sketches, characteristic of Contours. List the uses of Contour map. (10 Marks)

OR

- 6 a. What are Contemporary survey instruments used? Briefly write down salient features. (10 Marks)
- b. Explain the method of measurement of a horizontal angle by repetitions. (10 Marks)

**MODULE - 4**

- 7 How do you survey a land of 1 acre without using instruments? (20 Marks)

OR

- 8 What are the factors to be considered during the analysis of a site (upto 1 acre)? Explain each factor in detail. (20 Marks)

**MODULE - 5**

- 9 Briefly explain the factors considered while reading a land survey drawings. (20 Marks)

OR

- 10 Briefly write down the procedure involved during setting out center lines for a residential buildings. Give example. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

