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14ENG2.7

Second Semester B.Arch. Degree Examination, June/July 2017
Site Surveying and Analysis

Time: 3 hrs. Max. Marks: 100

Note: ***Answer FIVE full questions, selecting ONE full question from each module.***

Module-1

1 a. What are the instruments used in horizontal measurements? Write the use of each instrument. **(12 Marks)**

b. What are the classifications of survey based on object of survey? **(08 Marks)**

2 a. Explain different methods used settling out right angle to base line. **(10 Marks)**

b. A 20 m chain was found to be 10 cm too long after chaining a distance of 1500 m. It was found to be 18 cm too long at the end of days work after chaining a total distance of 2900 m. Find the true distance if the chain was correct before the commencement of the work. **(10 Marks)**

Module-2

3 a. Explain the types of accessories used in plane table survey. **(10 Marks)**

b. What are the working operations followed in setting up the plane table? **(10 Marks)**

4 a. Define the following terms:
i) Bench mark ii) Change point iii) Back sight
iv) Line of sight v) Reduced level **(10 Marks)**

b. The following staff readings were observed successively with a level. The instrument have been moved after third, sixth and eighth reading. The readings are 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 level book and calculate the RL of points. If the first reading was taken with staff held on a BM of RL 432.38 m. **(10 Marks)**

Module-3

5 a. Define the following: i) Contour ii) Contour interval
iii) Horizontal equivalent iv) Topography map **(08 Marks)**

b. Write the characteristics of contours. **(12 Marks)**

6 a. What are the uses of contours? **(10 Marks)**

b. What are the parts of theodolite? **(10 Marks)**

Module-4

7 Explain how the analysis of site (upto one acre) is done with respect to:
i) Topography ii) Vegetation iii) Water sheds iv) Nature of soil **(20 Marks)**

8 a. Explain the method of pacing of measuring horizontal distance. **(10 Marks)**

b. Briefly explain the reconnaissance survey during the observation of site. **(10 Marks)**

Module-5

9 a. Draw the symbols used in topo drawings:
i) Benchmark ii) North iii) River and lake
iv) Triangulation v) Contour maps **(10 Marks)**

b. Explain shortly the following terms used in settling out works:
i) Boning rods ii) Sight rails iii) Posts iv) Batter boards **(10 Marks)**

10 a. Sketch the single bed room building plan indicating the centre line of building. **(10 Marks)**

b. Explain various process involved in setting out centerlines of building. **(10 Marks)**

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.