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15ENG2.7

Second Semester B.Arch. Degree Examination, Dec.2016/Jan.2017
Site Surveying and Analysis

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

1 a. What is surveying? Explain the classifications of surveying. **(08 Marks)**

b. List the applications of surveying. **(08 Marks)**

c. Write a note on shrunk scale. **(04 Marks)**

OR

2 a. With a neat sketch explain indirect ranging or reciprocal ranging. **(08 Marks)**

b. List the different types of chains and tapes used in surveying. **(04 Marks)**

c. A 20m chain was found to be 15cm too long after chaining a distance of 1500m. It was found to be 20cm too long at the end of days work after chaining a total distance of 3200m. Find the true distance if the chain was correct before starting of work? **(08 Marks)**

Module-2

3 a. Write a note on cross staff and optical square. **(10 Marks)**

b. Explain the temporary adjustment with respect to plane table surveying. **(04 Marks)**

c. With a neat sketch explain intersection method of plane table survey. **(06 Marks)**

OR

4 a. Define the following terms used in levelling: i) Elevation; ii) Bench Mark; iii) Fore sight; iv) Line of collimation. **(08 Marks)**

b. Following consecutive readings were taken on points 1 to 7 along a line:
0.785, 1.325, 2.540, 3.435, 1.370, 2.330, 1.235, 1.655.
The instrument was shifted after the fourth reading. First reading was taken on a BM with RL = 100m. Enter the above readings in a page of a level book [Prepare a similar format in the booklet] and calculate the RL of points. Use collimation or height of instrument method. Also apply arithmetical check. **(12 Marks)**

Module-3

5 a. What is a contour? What are the characteristics of a contour? **(10 Marks)**

b. What are the commonly adopted indirect methods of location of contours? Explain any two. **(10 Marks)**

OR

6 a. Explain the temporary adjustments of a theodolite. **(08 Marks)**

b. Define the following with respect to theodolite:
i) Vertical axis
ii) Transiting
iii) Swinging the telescope. **(06 Marks)**

c. List the various electronic measurement instruments. List the uses of total station. **(06 Marks)**

Module-4

7 a. Explain in detail the reconnaissance survey during the observation of a site. **(08 Marks)**

b. Explain aerial and terrestrial photogrammetry. **(12 Marks)**

OR

8 Explain how the analysis of a site is done with respect to the following factors:
i) Topography; ii) Soil; iii) Hydrology; iv) Land forms; v) Climate. **(20 Marks)**

Module-5

9 a. Explain briefly types of land survey maps. **(10 Marks)**

b. What are the various notations to be indicated on a land survey drawing? Explain. (Any 10 notations). **(10 Marks)**

OR

10 a. With a neat sketch briefly explain the setting out of center lines of a building. **(12 Marks)**

b. Explain the following terms used in setting out works:
i) Reference grids ; ii) Horizontal and vertical controls. **(08 Marks)**

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