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09ENG2.6

Second Semester B.Arch. Degree Examination, Dec.2015/Jan.2016

Surveying and Levelling

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Define surveying. What are the objects of surveying? (10 Marks)
b. Write the difference between plane surveying and Geodetic surveying. (10 Marks)
- 2 a. What do you understand by ranging? Explain the method of ranging when the end stations are not intervisible. (10 Marks)
b. The area of a plan of an old survey plotted to a scale of 1cm = 15 m measures 175.25 sqcm as found by a planimeter. The plan is found to have shrunk so that a line originally 10 cm long measures 9.85 cm. Find: i) shrunk scale, ii) true area of the survey. (10 Marks)
- 3 a. Explain with a sketch the method of intersection in plane tabling. (10 Marks)
b. Define plane table survey. List and explain the accessories in plane tabling. (10 Marks)
- 4 a. Explain the temporary adjustments of a plane table. (10 Marks)
b. Define the terms:
i) Bench mark
ii) Line of collimation
iii) Back sight
iv) Foresight
v) Elevation (10 Marks)
- 5 a. Explain the temporary adjustments of a Dumpy level. (10 Marks)
b. The following consecutive readings were taken on a continuously sloping ground at 30 m interval using a dumpy level and a 4m levelling staff. The RL of starting point was 100.000 enter the readings in level book format. Compute the elevations by HI method. Apply check. 1.855, 2.330, 2.885, 3.380, 1.860, 3.540, 0.945, 1.530, 2.250, 3.180. (10 Marks)
- 6 a. With a neat sketch explain the parts of a transit theodolite. (10 Marks)
b. Explain the method of measuring the horizontal angle by repetition method. Also draw the standard tabular column for writing down the readings. (10 Marks)
- 7 a. Define a contour. Explain the characteristics of contours. (10 Marks)
b. Explain with sketches the use of contour maps. (10 Marks)
- 8 Write short notes on:
a. Shrunk scale
b. Resection in plane table survey
c. Advantages and disadvantages of plane tabling
d. Dumpy level (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.