

CBCS Scheme

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15ENG2.7

Second Semester B. Arch Degree Examination, June/July 2017

Site Surveying and Analysis

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing one full question from each module.
2. Draw Sketches wherever necessary.
3. Assume any missing data suitably.**

Module-1

- 1 a. Define surveying. (02 Marks)
b. Classify surveying based on
i) Purpose and
ii) Instrument. (08 Marks)
c. The plan of an area has shrunk such that a line originally 10cm now measures 9.8cm. If the original scale of the plan was 1cm = 10m. Determine :
i) Shrinkage factor
ii) Shrunk scale
iii) Correct distance corresponding to a measured distance of 60m
iv) Correct area corresponding to a measured area of 12,800 m². (10 Marks)

OR

- 2 a. List and explain different types of chains used in surveying. (10 Marks)
b. What is ranging? Explain indirect ranging with a neat sketch. (10 Marks)

Module-2

- 3 a. Explain with a sketch Main station, Tie station, Baseline, Check line and offset. (10 Marks)
b. Explain various accessories used in plane table survey. (10 Marks)

OR

- 4 a. Define the terms :
i) Line of collimation
ii) Bench Mark
iii) Reduced Level
iv) Change Pointer Turning Point. (08 Marks)
b. The following successive staff reading were taken with a leveling instrument, using a 5m staff, on continuously sloping ground at intervals of 25m : 0.545, 1.390, 1.535, 2.985, 3.085, 4.670, 0.815, 2.030, 3.150 and 4.515. The RL of first point was +65.000m. Enter the staff readings in level book format and compute elevations of all the points. Also find the gradient of the line joining first and last points. (12 Marks)

Module-3

- 5 a. Define contour. Explain characteristics of contours. (10 Marks)
b. Explain with sketches the uses of contour maps. (10 Marks)

OR

- 6 a. Explain in detail, how is horizontal angle measured using the theodolite by
i) Method of Repetition
ii) Method of reiteration (12 Marks)
b. Mention the various advantages of using a total station over other conventional instruments. (08 Marks)

Module-4

- 7 a. Explain how horizontal distance is measured without any instrument. (08 Marks)
 b. What is reconnaissance survey? Explain how terrain is studied by aerial survey. (12 Marks)

OR

- 8 a. List the various on site factors which influences site planning. (08 Marks)
 b. Explain briefly the analysis of following natural factors :
 i) Topography
 ii) Geologic formation and
 iii) Climate. (12 Marks)

Module-5

- 9 a. Explain different types of land survey maps. (12 Marks)
 b. Write short notes on :
 i) Convention symbols
 ii) Scale
 iii) Legend
 iv) Grid reference. (08 Marks)

OR

- 10 a. What is setting out? With a neat sketch briefly explain the setting out of centre line of a building. (12 Marks)
 b. Write short notes on any four :
 i) Stake
 ii) Batter board
 iii) Post
 iv) Slight rail
 v) Boning rod (08 Marks)

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