

CBCS SCHEME



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15ARC/ENG27

Second Semester B.Arch. Degree Examination, July/August 2021 Site Surveying and Analysis

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Distinguish between Plane surveying and Geodetic surveying. (06 Marks)
b. List the applications of Surveying. (06 Marks)
c. The area of the plan of an old survey plotted to a scale of 10m to 1cm measures now as 100.2cm² as found by planimeter. The plan is found to have shrunk so that a line originally 10cm measures 9.7cm only. Find i) Shrunk scale ii) True area. (08 Marks)
- 2 a. With a neat sketch, explain Indirect or Reciprocal ranging. (08 Marks)
b. List the types of chains and tapes used in Surveying. (08 Marks)
c. With a neat sketch, explain the use of a Line ranger. (04 Marks)
- 3 a. Explain the various accessories used in plane table surveying. (10 Marks)
b. Explain with a neat sketch, Main station, Tie station, Base line, Check line, Offset. (10 Marks)
- 4 a. Define the following terms used in leveling :
i) Elevation ii) Bench mark iii) Fore sight v) Line of collimation. (08 Marks)
b. The following readings were observed successively with a leveling instrument. The instrument was shifted after 5th and 11th readings. 0.585, 1.735, 3.295, 3.775, 0.350, 1.300, 1.795, 2.575, 3.375, 3.895, 1.735, 0.635 and 1.605. Draw a page of a level book and determine the RL of various points if the RL of point on the BM = 100m. Carryout arithmetic check (12 Marks)
- 5 a. Write short notes on : i) Contour gradient ii) Horizontal equivalent
iii) Interpolation of contours. (06 Marks)
b. List the uses of Contour maps. (06 Marks)
c. Explain the method of measurement of horizontal angles by method of reiteration. (08 Marks)
- 6 a. What is a Contour Line? List the various characteristics of Contours. (10 Marks)
b. Explain briefly the temporary adjustments in Theodolite. (06 Marks)
c. Define the terms : i) Transiting ii) Face left observation. (04 Marks)
- 7 Explain how the analysis of a site (upto 1 acre) is done with respect to the following factors :
a. Microclimate b. Vegetation c. Topography. (20 Marks)
- 8 a. Explain in detail Aerial and Terrestrial topography. (12 Marks)
b. Explain Reconnaissance survey during observation of a site. (08 Marks)
- 9 a. Explain the following terms in detail :
i) Horizontal and Vertical controls ii) Reference grids. (10 Marks)
b. Explain the various process involved in setting out of centre lines of a building. (10 Marks)
- 10 a. Explain the different types of Land survey drawings. (10 Marks)
b. What are the various notations to be indicated in Survey drawings (Any 10)? (10 Marks)

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.