

CBCS Scheme

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15ENG2.7

Second Semester B.Arch. Degree Examination, Dec.2017/Jan.2018

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. Define surveying. Explain classifications of surveying. (08 Marks)
b. What is shrunk scale? Explain character of work in surveying. (06 Marks)
c. The plan of an old survey plotted to a scale of 50 m to 1 cm was found to have shrunk. So that a line originally 20 cm long was 19.6 cm. There was also a note on the plan that the 20 m chain used was 0.1 m too long. If the area of the plan measured now by a planimeter is 150.28 cm². Find the true area of the survey. (06 Marks)

OR

- 2 a. Name different types of chains with respect to purpose of use. Mention the instruments used for chain surveying. (06 Marks)
b. What is ranging? Explain direct and indirect ranging. (08 Marks)
c. Explain the use of line ranger with a neat sketch. (06 Marks)

Module-2

- 3 a. Explain survey lines with sketches. (06 Marks)
b. Explain with neat sketch:
i) To erect a perpendicular to a chain line from a point on it.
ii) To drop a perpendicular to a chain line from a point outside it. (06 Marks)
c. Explain intersection and traversing method in plane table surveying with neat sketches. (08 Marks)

OR

- 4 a. Define leveling. Explain classification of leveling and natural errors in leveling. (10 Marks)
b. The following staff readings were observed successively with a level. The instrument have been moved after second, fifth and seventh reading 0.865, 2.105, 1.025, 1.580, 1.865, 2.230, 2.835, 2.355, 1.760 mts. Enter above readings in a page of a level book and calculate the RF of points. If the first reading was taken with a staff held on a bench mark of 560.50 m. (10 Marks)

Module-3

- 5 a. What is a contour? Explain direct and indirect methods in contouring with sketches. (08 Marks)
b. What are the uses of contour maps? (06 Marks)
c. What are the characteristics of contours? (06 Marks)

OR

- 6 a. Explain the temporary adjustment of theodolite. (06 Marks)
b. Explain method of repetition and reiteration with the sketches. (08 Marks)
c. What are the components of total station? List the uses of total station. (06 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.

Module-4

- 7 a. Explain the method of pacing of measuring horizontal distances. (08 Marks)
b. What are the basic checklist to be note down while performing site analysis? (06 Marks)
c. Explain the salient features of:
i) Terrestrial photogrammetry.
ii) Aerial photogrammetry. (06 Marks)

OR

- 8 a. Explain briefly any three of the following:
i) Topography
ii) Hydrology
iii) Microclimate
iv) Vegetation (12 Marks)
b. List the various Onsite factors influencing site planning. (08 Marks)

Module-5

- 9 a. Explain grid references for measurements. (08 Marks)
b. Briefly explain types of land survey maps. (08 Marks)
c. Write the conventional symbols used in maps for the following:
i) Barbed wire
ii) Tele line
iii) Railway double line
iv) Fenced road (04 Marks)

OR

- 10 a. Briefly explain setting out in vertical direction with the help of the following:
i) Boning rods and travelers
ii) Sight rails
iii) Slope rails or batter boards
iv) Profile boards (10 Marks)
b. With a neat sketch, briefly explain the setting out of centre lines of a building. (10 Marks)
