

CBCS SCHEME

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15ENG27

Second Semester B.Arch. Degree Examination, Dec.2019/Jan.2020 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? (02 Marks)
b. Classify surveying based on: (i) Purpose (ii) Instrument (08 Marks)
c. The area of the plan of an old survey plotted to a scale of 10 metres to 1 cm measures now as 100.2 sq.cm as found by a planimeter. The plan is found to have shrunk so that a line originally 10 cm long now measures 9.7 cm only. Find:
(i) Shrunk scale (ii) True area of survey. (10 Marks)

OR

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

Module-2

- 3 a. Write short notes on: (i) Cross Staff (ii) Site Square (10 Marks)
b. With neat sketches, explain intersection method of plane table survey. (10 Marks)

OR

- 4 a. The following staff readings were observed successively with a level, the instrument having moved after third, sixth and eighth reading:
2.228, 1.606, 0.988, 2.090, 2.864, 1.262, 0.602, 1.982, 1.044, 2.684 metres.
Enter the above readings in a page of a level book and calculate RL of points if the first reading was taken with a staff held on a benchmark of 432.384 m. (12 Marks)
b. Define terms:
(i) Benchmark (ii) Reduced level (iii) Level surface (iv) Line of collimation (08 Marks)

Module-3

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

OR

- 6 a. Explain temporary adjustments of theodolite. (12 Marks)
b. Define the following terms:
(i) Vertical axis (ii) Transiting (08 Marks)
(iii) Swinging the telescope (iv) Telescope inverted

Module-4

- 7 Explain in detail the reconnaissance survey during the observation of a site. (20 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.

OR

- 8 Explain the analysis of site done with respect to following factors taking examples (any 5):
- | | | | |
|-----------------|-----------------------|-----------------|------------|
| (i) Topography | (ii) Geology | (iii) Hydrology | (20 Marks) |
| (iv) Vegetation | (v) Site connectivity | (vi) Climate | |

Module-5

- 9 a. Explain different types of land surveys maps. (12 Marks)
 b. Write short notes on: (i) Scale (ii) Legend (08 Marks)

OR

- 10 a. With a neat sketch briefly, explain the setting out of center line of a building. (12 Marks)
 b. Draw symbols for the following features use in conventional symbols to represent in maps:
 (i) Evergreen trees (ii) River/Lake
 (iii) Sand pit (iv) Rocks (04 Marks)
 c. For the following symbols shown in Fig.Q10(c), mention what features it represent in maps.

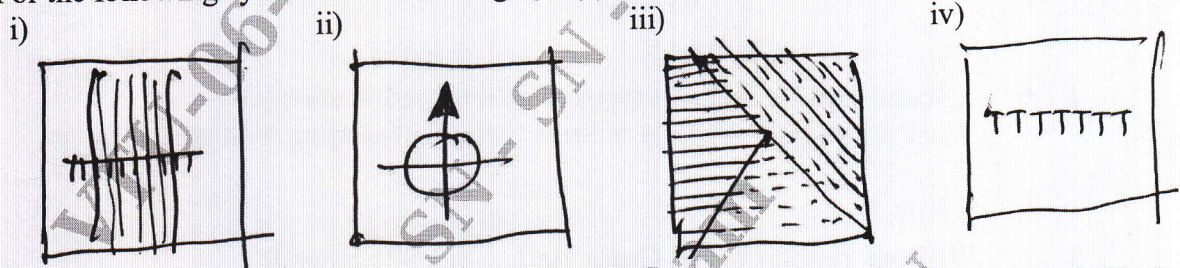


Fig.Q10(c)

(04 Marks)
