

# CBCS SCHEME

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18ENG2.7

## Second Semester B.Arch. Degree Examination, June/July 2019 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. (02 Marks)  
b. With neat illustrations explain the fundamental principles of surveying. (08 Marks)  
c. Write short notes on metric chain and ranging rod. (10 Marks)

OR

- 2 a. Discuss classification of surveying in detail. (10 Marks)  
b. Write short notes on shrunk scale and graphical scale. (10 Marks)

### Module-2

- 3 a. State the purpose of ranging out survey lines. (02 Marks)  
b. With relevant sketches explain the procedure for reciprocal ranging. (08 Marks)  
c. Sketch the following cross staff survey of a field ABCDEFGH and calculate its area when all measurements are in meters.

|      |       |     |
|------|-------|-----|
|      | 300 H |     |
| G20  | 270   |     |
|      | 260   | 75F |
|      | 210   | 60E |
| D80  | 170   |     |
| C150 | 150   |     |
|      | 40    | 40B |
|      | 0A    |     |

(10 Marks)

OR

- 4 a. List the various instruments used to set out right angles. (02 Marks)  
b. Explain the working of any two in detail. (08 Marks)  
c. In detail explain radiation and intersection method of plane table survey. (10 Marks)

### Module-3

- 5 a. The following staff readings were observed successively with a level, the instrument having been moved after third, sixth and eighth reading:  
2.225, 1.605, 0.985, 2.090, 2.865, 1.265,  
0.600, 1.985, 1.045, 2.685 meters  
Enter the above readings in a page of a level book and calculate the R.L. of points  
i) By plane of collimation method ii) By rise and fall method.  
The first reading was taken with a staff held on bench mark of 432.385m. (10 Marks)  
b. Explain dumpy level or tilting level with help of neat sketches. (10 Marks)

OR

- 6 a. Define levelling. (02 Marks)  
 b. State the objectives and used of levelling. (04 Marks)  
 c. Differentiate between self reading staff and target staff. (04 Marks)  
 d. Write short notes on:  
 i) Bench Mark  
 ii) Reduced level  
 iii) Line of collimation  
 iv) Back sight and fore sight. (10 Marks)

Module-4

- 7 a. Define Contour. (02 Marks)  
 b. With neat illustrations explain the various characteristics of contours. (08 Marks)  
 c. What are the fundamental axes of a theodolite? What should be the desired relation between each of them? (10 Marks)

OR

- 8 a. List the various parts of a transit theodolite. (04 Marks)  
 b. Write short notes on total station. (06 Marks)  
 c. What is grid method of contouring? Explain with a sketch. (05 Marks)  
 d. Differentiate between direct and indirect method of contouring. (05 Marks)

Module-5

- 9 a. What do you understand by site climate? (05 Marks)  
 b. List the various aspects of site analysis. (05 Marks)  
 c. Explain with illustrations how topography and vegetation influence the site design. (10 Marks)

OR

- 10 a. Sketch any 10 conventional symbols used in maps. (10 Marks)  
 b. With a neat sketch briefly explain the settling out of centre lines of a building. (10 Marks)

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