CBCS SCHEME

USN | | | | | | | | | | |

18ENG27

Second Semester B.Arch. Degree Examination, Aug./Sept. 2020
Site Surveying & Analysis

Time: 3 hrs. Max. Marks: 100

Note: 1. ***Answer any FIVE full questions, choosing ONE full question from each module.***
2. ***Assume data wherever necessary.***

Module-1

1 a. What is Surveying? **(02 Marks)**

b. Briefly explain the classification of survey based on :
i) Nature of the field survey
ii) object of survey
iii) instruments used in survey **(18 Marks)**

OR

2 a. Explain briefly the fundamental principles of surveying. **(08 Marks)**

b. i) What are the various instruments for chaining? **(02 Marks)**
ii) What are the various types of commonly used chains? **(02 Marks)**
iii) Draw a typical 5m long metric chain. **(08 Marks)**

Module-2

3 a. What is Ranging? What are the methods of Ranging? **(05 Marks)**

b. Explain the indirect method of Ranging with a neat diagram. **(15 Marks)**

OR

4 a. What are the instruments used in plane table surveying? **(03 Marks)**

b. Mention the methods/systems of plane tabling. **(02 Marks)**

c. Explain the Intersection/Graphic triangulation method of plane tabling with required sketch. **(15 Marks)**

Module-3

5 a. Define the following terms :
i) Leveling
ii) Level surface
iii) Datum
iv) Elevation
v) Bench mark. **(10 Marks)**

b. Draw the diagram of a Dumpy level and label its parts. **(10 Marks)**

OR

6 a. The following consecutive levels/readings were taken with a level and 5m leveling staff on continuously sloping ground at a common internal of 20m ; 0.385 ; 1.030 ; 1.925 ; 2.825 ; 3.730 ; 4.685, 0.625 ; 2.005 ; 3.110 ; 4.485. The reduced levels of the first point was 208.125m Rule out a page of a level field book and enter the above readings. Calculate the reduced levels of the points by Rise and fall method and also gradient of the line joining the first and the last point. **(10 Marks)**

b. Define the terms :
   i) Station
   ii) Height of instrument
   iii) Back sighting
   iv) Foresighting
   v) Intermediate station. **(10 Marks)**

Module-4

7 a. Explain the characteristics of contours. **(10 Marks)**

b. Define the following terminologies with respect to surveying with theodolite.
   i) Vertical Axis
   ii) Transiting
   iii) Centering
   iv) Swinging the telescope
   v) Axis of the level tube. **(10 Marks)**

OR

8 a. Define the following terminologies, with sketches :
   i) Contour
   ii) Contour interval
   iii) Uniform slope
   iv) Vertical Clift **(12 Marks)**

b. List the uses of contour maps with sketches. **(08 Marks)**

Module-5

9 a. Draw and label any 10(ten) of the conventional symbols used in survey maps. **(10 Marks)**

b. i) What is Reconnaissance survey?
   ii) What is photogrammetry? **(10 Marks)**

OR

10 a. Explain the process of setting out centre line of a building. **(10 Marks)**

b. Write short notes on :
   i) Reference grids
   ii) Control for setting out. **(10 Marks)**

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