

THIRD SEMESTER DIPLOMA EXAMINATION IN
ARCHITECTURE — APRIL, 2017
SURVEYING FOR ARCHITECTURE

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. The preliminary inspection of the area to be surveyed named as :
2. The system of representing bearing measured clockwise or counter clockwise from north or south towards the east or west is known as :
3. The fixed reference point of known elevation is :
4. The co-ordinate length measured at right angles to the meridian direction is :
5. The system that captures, stores, analyzes, manages and presents data that are linked to location. (5 × 2 = 10)

PART — B

(Maximum marks : 30)

II Answer *any five* of the following questions. Each question carries 6 marks.

1. State the primary division of surveying.
2. Describe briefly the uses of various accessories of plane table.
3. Explain briefly the component parts of a remote sensing system.
4. List the methods of reducing levels. Compare them.
5. Define the terms (i) Bench mark (ii) Line of collimation.
6. Explain the procedure to measure the horizontal angle by repetition method.
7. Discuss the temporary adjustments of a theodolite. (5 × 6 = 30)

PART — C

(Maximum marks : 60)

(Answer *one full* question from each unit. Each full question carries 15 marks.)

UNIT — I

- III (a) Define the term orientation. 6
- (b) The following are the fore bearings of the lines of a closed traverse ABCD :
AB- N 46° 10' E, CD-S 9° 50' W, BC-S 60° 40'E, DA-N 80° 40'W
Calculate the interior angles of the traverse. 9

OR

- Marks
- IV (a) Differentiate between back bearing and fore bearing. Also write the relation between them. 6
 (b) Write the advantages and disadvantages of plane table survey. 9

UNIT — II

- V (a) Differentiate between contour interval and horizontal equivalent. 6
 (b) Describe the characteristics of contours. 9

OR

- VI (a) Explain reciprocal levelling. 6
 (b) The following staff readings were observed successively with level, the instrument having been moved forward after the second, fourth and eighth readings :
 0.875, 1.235, 2.310, 1.385, 2.930, 3.125, 4.125, 0.120, 1.875, 2.030, 2.765
 The first reading was taken with the staff held upon a benchmark of elevation 132.135m. Enter the readings in level book-form and reduce the levels. Apply the usual checks. Find also the difference in level between the first and the last points. 9

UNIT — III

- VII (a) State the meaning of swinging the telescope. 6
 (b) Compare scale plate (lower plate) and vernier plate (upper plate). 9

OR

- VIII (a) Write the Bowditch's rule for closing error. 5
 (b) Following table gives data of consecutive co-ordinates in respect of a closed theodolite traverse ABCDA.

Station	N	S	E	W
A	300.75	200.50
B	200.25	..	299.25	..
C	..	299.00	199.75	..
D	..	200.00	..	300.50

- Calculate, (i) Magnitude and direction of closing error.
 (ii) Corrected consecutive co-ordinate of station B using transit rule. 10

UNIT — IV

- IX (a) Illustrate about Distomat. 5
 (b) Write the uses of electronic theodolite. 10

OR

- X (a) List out the modern surveying equipments. 6
 (b) Discuss the uses of TOTAL STATION. 9