

Roll No.

3029

B. Tech. 3rd Semester (Civil Engg.)

Examination – December, 2019

SURVEYING

Paper : PCC-CE-207-G

Time : Three Hours]

[Maximum Marks : 75

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt five questions in all, selecting one question from each unit. Question Number 1 is compulsory. All questions carry equal marks.

1. Explain the following : 3 × 5 = 15
- (a) Reciprocal Ranging
 - (b) Working of Prismatic Compass
 - (c) Different kinds of Bench Mark
 - (d) Checks on closed Traverse
 - (e) Stadia system of Tachometry.

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P. T. O.

UNIT – I

2. (a) Describe the basic principle of surveying in details. 5
(b) Write down the various tape corrections. 10
3. The following are the bearings of the lines of a closed traverse ABCD : 15

LINE	F.B.
AB	N 56° 10' E
BC	S 50° 40' E
CD	S 19° 50' W
DA	N 70° 40' W

Calculate the interior angles of the traverse.

UNIT – II

4. The following consecutive readings were taken with the help of a dumpy level : 15
1.905, 2.655, 3.910, 4.025, 1.965, 1.700, 1.595, 1.260, 2.545, 2.010, 3.145.
The instrument was shifted after the fourth and seventh readings. The first reading was taken on the staff held on the B.M. of R.L. 100.000 m. Calculate the R.L.s of the points and apply the arithmetic check.
5. Explain Curvature and Refraction. Calculate the errors occur due to curvature and refraction. And describe the combined correction for both of the errors. 15

UNIT – III

6. (a) Write down the characteristics of contours. 7
(b) Describe the two point problem and write down the solution for that. 8
7. Write down the different methods of finding out the height of an object by means of a Theodolite. 15

UNIT – IV

8. Describe the fixed hair and movable hair methods of Stadia Tacheometry with their expressions. 15
9. A simple circular curve is to have a radius of 573 m. The tangents intersect at chainage 1060 m and the angle of intersection is 120° . Find, 15
- Tangent distance
 - Chainage at beginning and end of the curve
 - Length of the long chord
 - Degree of the curve
- Number of full and sub-chords.
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