

ROLL No:

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Total number of pages: 02

Total number of questions: 06

B.Tech. || CE || 3rd Sem

Survey

(RP)

Subject Code: BTCE-303A/304

Paper ID: M/18

(2014 batch onwards)

Max Marks: 60

Time allowed: 02Hrs

Important Instructions:

- All questions are compulsory
- Assume any missing data

PART A ($10 \times 2 = 20$)

Q. 1. Short-Answer Questions:

- How would you select a station and base line in surveying.
- What do you mean by direct and indirect ranging.
- What do you mean by true and magnetic meridian.
- What are the various type of offset.
- In list the accessory of plane table.
- What is the difference between whole to part and part to whole.
- What are the various type of temporary adjustment in plane table.
- Draw a reverse curve.
- What is meant by closing error.
- What is local attraction.

PART B ($5 \times 8 = 40$)

Q. 2. Differentiate clearly between prismatic compass and surveyor compass?

CO2

OR

The following are the bearings of the lines of a closed traverse ABCD.

Line	FB
AB	N56°-10' E
BC	S 50°-40' E
CD	S 19°-50' W
DA	N 56°-10' W

Calculate the interior angle of the traverse.

Q. 3. Explain what is understood by orientation of plane table and how the method of resection is useful for this purpose. Define three point problem with the help of neat sketch describe the stepwise solution of this problem in field using any method?

CO3

OR

What is meant by two point problem in plane tabling surveying? Explain with neat sketch the solution of two point problem in the field?

- Q. 4. Comparison of the collimation method and rise and fall method of reduction of levels. CO1

OR

The following consecutive reading were taken with the help of a level:
1.904, 2.653, 3.906, 4.026, 1.964, 1.702, 1.592, 1.261, 2.542, 2.006, 3.145.

The instrument was shifted on fourth and seventh reading. The first reading was taken on BM of RL 100.000 meter. Rule out a page of level field-book enter above readings there on. Calculate the RLs of the points and apply the arithmetical check.

- Q. 5. A theodolite was set up at a distance of 200m from a chimney, and the angle of elevation to its top was $10^{\circ}-48'$. The staff reading on BM of RL 70.25 with the telescope horizontal was 0.977. Find the reduced level of the top of the chimney.

OR

Enumerate Permanent adjustment of transit theodolite and various types of error during the field work using theodolite. CO4

- Q. 6. a) Explains the following terms: CO5
Level surface, vertical line, Fore sight, Bench Mark.
b) What are the various method of contouring? Describe merits and demerits of each.

OR

In order to determine the constants of tachometer, two distance 201 m and 400 m were accurately measured from the instrument and reading on a stadia rod on the upper and lower wires were taken as follow:

Distance in meters	Reading at	
	Lower stadia	Upper stadia
201	2.00	4.00
400	0.50	4.50

Determine the values of the constant and find the distance when the readings of the 'wires' 1.5m and 4.5m. The line of sight being horizontal in all cases.