Code No: CE1505   **GEC-R14**

II B. Tech I Semester Regular Examinations, November 2016
SURVEYING
(Civil Engineering)

Time: 3 Hours   Max. Marks: 60

Note: All Questions from **PART-A** are to be answered at one place.
Answer any **FOUR** questions from **PART-B**. All Questions carry equal Marks.

PART-A

$6 \times 2 = 12M$

1. What do you understand by base line and check line?
2. Differentiate between true bearing and magnetic bearing.
3. What is a contour line? What is the importance of contour maps in civil engineering works?
4. Differentiate between transit theodolite and non-transit theodolite.
5. What is tachometry? List out the different systems of tachometric measurements.
6. How do you determine the minimum radius of a curve?

PART-B

$4 \times 12 = 48M$

1. a) Write detailed notes on classification of surveying. (6M)

   b) There is an obstacle in the form of a pond on the main chain-line AB. Two points C and D were taken on the opposite sides of the pond. On the left of CD, a line CE was laid out 100m in length and a second line CF, 80m long was laid out on the right of CD such that E, D and F are in the same line of sight. ED and DF were measured and found to be 60m and 56m respectively. Find out the obstructed length CD. (6M)

2. a) Explain the functioning of a prismatic compass with the help of a neat sketch. (6M)

   b) A compass transverse ABCDEA was run anti-clockwise and the following bearings were taken, where local attraction was suspected. (6M)

Line	FB	BB
AB	$150^0 30'$	$329^0 45'$
BC	78^0	$256^0 30'$
CD	$42^0 30'$	$223^0 45'$
DE	$315^0 45'$	$134^0 15'$
EA	$220^0 15'$	$40^0 15'$

Determine the local attraction and the corrected bearings.

3. a) Explain the different methods of levelling using suitable examples. (8M)

   b) Explain the terms: (4M)

      i) Ridge line

      ii) Contour gradient

4. a) Explain the different methods of trigonometric levelling when the base of the object is inaccessible. (6M)

   b) Describe the method of reiteration for measurement of horizontal angles by theodolite. (6M)

5. a) List out the different systems of tachometric surveying and explain any one system in detail. (6M)

   b) Explain the functioning of a total station by stating its advantages and disadvantages. (6M)

6. List out the different linear methods of setting out simple curves and explain all of them with the help of neat sketches. (12M)

*****