R13

B.Tech II Year II Semester (R13) Supplementary Examinations May/June 2017
SURVEYING – II
(Civil Engineering)

Time: 3 hours   Max. Marks: 70

PART – A
(Compulsory Question)
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1   Answer the following: (10 X 02 = 20 Marks)
   (a) What do you mean by trigonometric surveying?
   (b) Define principle of triangulation.
   (c) What are the uses of receiver in remote sensing?
   (d) List out various instruments used in EDM.
   (e) State the merits and demerits of tacheometric surveying.
   (f) What are the uses of compound curves?
   (g) List out various errors in tacheometry.
   (h) What are the various constants used in tacheometric surveying?
   (i) Define the terms Face left and face right observations.
   (j) Define reverse curves.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2   How do you determine the level at the top of an object when:
   (a) Base is accessible.
   (b) Base is inaccessible.

OR

3   (a) What are the principal objects to be kept in view in selecting the ground for a base line in large survey?
        Enumerate in sequence the operations necessary before the measurement of the base line commences.
        State the correction to be applied base line measurements.
    (b) Explain how you would prolong a given base line.

UNIT – II

4   (a) What are the different methods employed in tachometric survey? Describe the methods most commonly
        used.
    (b) Two distance 20 and 100 meters were accurately measured out and the intercepts on the staff between
        the outer stadia hair are 0.196 m at former and 0.996 m at the later. Calculate the tacheometric
        constants.

OR

5   (a) Describe the commonly occurred errors in tacheometry.
    (b) An ordinary theodolite is to be converted into an anallactic tachometer with a multiplier of 100 by an
        insertion of a new glass stadia diagram and an additional convext lens. Focal length of object glass is
        15 cm, fixed at a distance of 10 cm form the trunnion axis. A focusing slide carries the eye-piece. If a
        suitable lens of 10 cm focal length is available for the anallactic lens, calculate the fixed distance at which
        this must be placed from the objective and the spacing of the stadia hairs on the diaphragm.

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UNIT – III

6   Define triangulation. Also explain the classification f triangulation.

OR

7   Write short notes on the following:
- (a) Triangulation.
- (b) Signals and towers.
- (c) Routine of triangulation survey.

UNIT – IV

8   What are the various methods used in setting out a simple curve. Describe any one of them.

OR

9   Differentiate between simple and compound curves. What are the elements used in setting up a compound curve?

UNIT – V

10   Define the principle and working of a total station.

OR

11 (a)   What is remote sensing? Explain the principle and terms involved in it.
    (b)   List out the various applications of remote sensing.

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