



C09-C-305

3221

BOARD DIPLOMA EXAMINATION, (C-09)

OCT / NOV-2015

DCE - THIRD SEMESTER EXAMINATION

SURVEYING – II

Time : 3 hours]

[Total Marks : 80

PART - A

3 X 10 = 30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. State any three instrumental errors in theodolite survey.
2. What is a Theodolite? When do you call it as a Transit Theodolite?
3. What do you mean by omitted measurements in theodolite survey?
4. What is trigonometric levelling? When is trigonometric levelling used?
5. In tacheometry, write the expression for horizontal distance, vertical component and R.L. of staff station when the line of sight is inclined upwards to the horizontal by θ and the staff is held vertically.
6. State the three different cases of Tangential Tacheometry.
7. Define (i) Point of commencement and (ii) Back tangent.
8. List the different angular methods of curve setting.
9. Write a short note on Distomat.
10. What is the advantage of Terrestrial-stereo Photogrammetry over Plane-table Photogrammetry?

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1

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PART - B

10 X 5 = 50

- Instructions :** (1) Answer any **five** questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain measurement of horizontal angle by the method of repetition.
12. Explain with the help of neat sketch the fast needle method of traversing.
13. In order to ascertain the elevation of the top of a signal Q on a hill, observations were made from two instrument stations P and R at a horizontal distance of 100 m apart, the stations P and R being in line with Q. The angles of elevation of Q at P and R were $28^{\circ}42'$ and $18^{\circ}06'$ respectively. The staff readings upon the Benchmark of elevation 287.28 m were respectively 2.870 m and 3.750 m When the instrument was at P and R, the telescope being horizontal. Determine the elevation of the foot of the signal, if the height of the signal above its base is 3 m.
14. (a) Explain briefly how the additive and multiplying constants of a Tacheometer are determined in the.
(b) Differentiate between fixed-hair method and movable-hair method of tacheometry.
15. Two straight lines AB and BC are connected by a circular curve of 300 m radius. Calculate the following elements, if the deflection angle is 30° :
(a) Tangent length (b) Length of curve
(c) Length of long chord (d) Mid-ordinate
16. What are the different linear methods for setting out simple circular curves? Explain the procedure to set out the curve by radial offsets from the tangents.
17. List the six advantages and four disadvantages of Global Positioning System.
18. (a) Explain briefly Raster and Vector data representation in GIS.
(b) State any five applications of GIS in transport planning.

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