3221

BOARD DIPLOMA EXAMINATION, (C–09)
MARCH/APRIL—2016
DCE—THIRD SEMESTER EXAMINATION

SURVEYING—II

Time : 3 hours]   [*Total Marks* : 80

PART—A   3×10=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. What is a Theodolite? When do you call it as a transit theodolite?

2. List the fundamental lines of a theodolite.

3. What do you mean by omitted measurements in theodolite survey?

4. What is trigonometric levelling? When is trigonometric levelling used?

5. What are the different methods of tacheometric surveying?

6. What do you mean by Stadia Tacheometry?

7. List any two linear methods of setting out a simple circular curve.

8. Define the following :

   (a) Angle of intersection

   (b) Long chord

9. Write any three uses of Distomat.

10. Write a short note on GPS.

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 vertical angle using a theodolite.

12. Explain 'error of closure' with neat sketch.

13. Write the procedure to find the distance and elevation of an object whose base is inaccessible and the two instrument stations being not in the same vertical plane.

14. During the course of tangential tachometry, the following readings were noted :

Inst. stan.	Staff stan.	Target	Vertical angle	Remarks
O	P	Lower	–3°15	Lower and Upper targets are n same vertical line 3·0 m apart
		Upper	–2°30	

Calculate the horizontal distance *OP*.

15. Two tangents intersect at a point *B*, of chainage 380·00 m, deflection angle being 36°. Calculate all the necessary data for setting out a simple circular curve with radius of 300 m by Rankine's method of deflection angles. Take peg interval = 30 m.

16. Obtain expressions for the offsets from chords produced in a simple circular curve.

17. *(a)* What are stereoscopic plotting instruments? What are the main components of such instruments?

(b) List any five uses of photogrammetry.

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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