3221

BOARD DIPLOMA EXAMINATION, (C–09)
APRIL/MAY—2015
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. State any three personal errors in theodolite survey.

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

3. Define latitude and departure of a survey line.

4. List out the different cases of trigonometric levelling.

5. When do you prefer tangential tacheometry?

6. List out the instruments used in tacheometric surveying.

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7. Define the following :

(a) Angle of intersection

(b) Long chord

8. List the different angular methods of curve setting.

9. Define the term 'total station'.

10. List the criteria for an ideal map projection.

<center>**PART—B**   10×5=50</center>

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. What are 'face-left' and 'face-right' observations? Why is it necessary to take observations on both faces?

12. List the errors that are eliminated by Repetition method. How will you set out a horizontal angle by method of repetition?

13. Find the RL of top of a chimney from the following data :

Inst. Station	Reading on BM	Vertical Angle	RL of BM	Remarks
A	1·578 m	10°12		AB = 30 m, A and
B	1·269 m	8°20	543·075 m	B are in line with the top of chimney

14. The elevation of a point P is to be determined by observations from two adjacent stations of a tacheometric survey. The staff was held vertically upon the point and the instrument is fitted with an anallatic lens, the constant of the instrument being 100. Compute the elevation of the point P from the following data. RL of BM is 75·230 m :

Inst. Station	Height of Axis (m)	Staff Point	Vertical Angle	Staff Readings (m)
A	1·44	BM	3°12	1·280, 1·940, 2·680
		P	5°36	1·660, 2·270, 2·880

15. What are the different elements of a simple curve? With the help of neat sketches, write the expressions for the elements of a simple curve.

16. Two tangents intersect at chainage 59 chains and 60 links, the deflection angle being 50°30 . Calculate necessary data for setting out a curve of 15 chains radius to connect the two tangents, if it is intended to set out the curve by offsets from the chords produced. [Take peg interval = 100 links, length of chain being 20 m (100 links)]

17. *(a)* List the advantages and disadvantages of Global Positioning System.

(b) What are the uses of Global Positioning System Receivers?

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

(b) List any five uses of photogrammetry.

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