3221

BOARD DIPLOMA EXAMINATION, (C–09)
OCT/NOV—2014
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. Define the following :

(a) Axis of telescope

(b) Swinging of telescope

(c) Telescope normal

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. What is an anallatic lens? Mention its advantage.

7. List the different angular methods of curve setting.

8. Define the following :

   (a) Point of commencement

   (b) Back tangent

9. Mention the uses of total station.

10. Mention the types of photogrammetry.

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PART—B   10×5=50

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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. The following bearings were observed in a traverse survey. Draw a sketch showing the relative positions of the lines and calculate the deflection angles :

Line	Bearing
AB	N 52° 45 E
BC	N 34° 30 E
CD	S 85° 15 E
DE	N 46° 45 E
EF	S 82° 0° E

12. Explain measurement of vertical angle using a theodolite.

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. A line was levelled tacheometrically with a tacheometer fitted with an anallatic lens, the value of the constant being 100. The following observations were made, the staff having been held vertically :

Inst. Station	Height of Axis (m)	Staff at	Vertical angle	Staff readings (m)	Remarks
A	1·44	BM	2° 24	1·200, 1·830, 2·460	RL of BM =37·725 m
A	1·44	B	4° 36	1·350, 1·820, 2·290	
B	1·41	C	6° 12	0·720, 1·380, 2·040	

Compute the elevations of *A, B* and *C.*

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

16. If the tangents to a circular curve having 500 m radius intersect at an angle of 120° and the chainage of point intersection is 1520·5 m then calculate

(a) tangent distance

(b) degree of the curve

(c) length of long chord

(d) length of the curve

17. *(a)* List the advantages and disadvantages of global positioning system.

(b) What are the uses of global positioning system receivers?

18. *(a)* Define GIS along with its subsystems.

(b) List various types of data representation in GIS and list out categories of GIS.

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