C14–C–**303**

4228

BOARD DIPLOMA EXAMINATION, (C–14)
MARCH/APRIL—2018
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. List any three purposes of leveling.

2. Define *(a)* fore sight and *(b)* intermediate sight.

3. List three different types of leveling staves.

4. List any three relations between fundamental lines.

5. List any three points that should be noted while booking of staff reading.

6. Define *(a)* contour and *(b)* horizontal equivalent.

7. List any six component parts of a theodolite.

8. Define *(a)* swinging and *(b)* transiting.

9. List types of omitted measurement in a closed traverse.

10. Distinguish between consecutive coordinates and independent coordinates.

PART—B 10×5=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. List the types of leveling instruments. Give the main component parts of a dumpy level and their functions. 2+8=10

12. The following readings were observed in a leveling job :

2·50, 1·00, 1·50, 1·80, 2·30, 2·90, 1·30, 3·20, 2·80, 2·00 and 1·50

The instrument shifted after the 4th and 7th readings. The first reading was taken on a BM of 250·00 m. Find the RIs of all points. 10

13. Explain briefly profile leveling. How is it plotted? Explain about the working profile of a leveling. 3+2+5=10

14. *(a)* Explain briefly the natural and instrumental errors in leveling. 6

(b) List any eight precautions to be taken by level man and staff man while doing leveling. 4

15. *(a)* List any five characteristics of contours. 5

(b) Explain briefly contouring by method of *(i)* cross-section and *(ii)* radial lines. 5

/4228 2 [*Contd...*

16. Explain the measurement of horizontal angle by reiteration method. Give the proforma. 8+2=10

17. The following data was obtained during a theodolite traversing. Balance the traverse by Bowditch's method : 10

Line	Length (m)	Latitude N	Latitude S	Departure E	Departure W
AB	108	107·97	—	3·77	—
BC	250	14·39	—	249·37	—
CD	123	—	122·94	4·12	—
DA	256	0	—	—	256·00

18. Find the area of the closed traverse having the following data by coordinate method. Assume independent coordinates of the station *A* suitably : 10

Side	Latitude	Departure
AB	225 5	120 5
BC	245 0	210 0
CD	150 5	110 5
DA	170 0	220 0

★ ★ ★