3015

BOARD DIPLOMA EXAMINATION, (C-09)
OCT/NOV—2018
DCE—FIRST YEAR EXAMINATION

SURVEYING - I

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. Define surveying and state two principles of surveying.

2. What are the three types of obstacles in chaining? Give example for each.

3. What are the conventional sign used in survey for the following:

    (a) Cuitivated land, (b) cutting, (c) Level crossing

4. A certain field was measured with a 30m chain and found to contain 50sqm. It was afterward found that the Chain was 0.1m, too short. What is the true area of the field?

5. What is meant by local attaraction?

6. Convert the following W.C.B.s into Q.Bs.

    a) $54^0 30'$　　b) 132^0　　c) $243^0 30'$

7. Define the terms :

    a) Level surface　　b) Datum　　c) Axis of bubble tube

8. Distinguish between G.T.S. Bench Mark and Permanent Bench Mark.

9. Define Contouring and state methods of contouring.
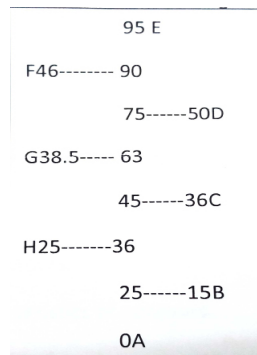
10. State three uses of Abney level.

Instructions : (1) Answer *any* **five** questions.

(2) Each questions carries **ten** marks.

(3) Answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.

11. a) Following prependicular offsets were taken from the centre line of a road to a hedge.

Offset no.	0	1	2	3	4	5	6	7	8
Offset in m.	3.29	4.05	6.23	5.75	4.76	5.26	4.32	3.92	2.91
Distance in m.	0	5	10	15	20	30	40	55	70

Compute the area between ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ ng
i) Trapezoidal rule ii) Simpson's Rule.

12. Find the area in sqm of the field from the following notes relative to cross staff survey.

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                    95 E
         F46-------- 90
                         75------50D
         G38.5----- 63
                      45------36C
         H25-------36
                      25------15B
                  0A
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13. List out ten errors in Prismatic Compass.

14. The following are the observed bearings of the lines of a traverse taken with compass in a place where the local attraction was suspected.

Line	F.B.	B.B.
AB	252^{0}00'	69^{0}30'
BC	206^{0}00'	31^{0}30'
CD	126^{0}50'	303^{0}50'
DE	36^{0}00'	216^{0}00'
EA	342^{0}30'	162^{0}30'

correct the bearings of the lines for local attraction.

15. The group of figures below refer to staff readings taken with a level from instrument stations P,Q,R,S and T. Thefirst and last readings in each group are the back sights and fore sights respectively. The back sight from instrument station P was taken with staff held on a B.M. at 200.00m

P - 2.575, 0.865, 0.890, 0.415

Q - 1.650, 1.430, 0.610

R - 1.000, 1.590, 1.115

S - 2.430, 3.485, 3.780, 2.785

T - 2.630, 2.100, 2.290

Book the readings calculate RL's by Rise and Fall method Determine the R.L of each station. Apply check.

16. a) Compare the height of instrument method and Rise and Fall method in leveling.

b) In leveling across a river two pegs A and B were fixed on opposite banks. Thefollowing readings were taken.

	Staff at A	Staff at B
Level near A	3.195	2.685
Level near B	2.840	2.105

If R.L of pegs at A=30.480M find the R.L of B.

17. a) State any five uses of contours.

b) Describe any five characteristics of contours.

18. Describe briefly the principle of pantograph with a neat sketch.

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