C-18-C-304C

6314

BOARD DIPLOMA EXAMINATION, (C-18)
NOVEMBER - 2019
DCE - III SEMESTER EXAMINATION
ADVANCED SURVEYING

Time : 2 Hours]   [Total Marks : 40

PART - A   08×01=08

(2) Each question carries ONE mark.

1   Define Transiting.

2   What is the Principle of Tacheometry ?

3   Define Photogrammetry.

4   Mention two cases that occur in Trigonometric levelling.

5   Mention any two methods of setting out circular curve by Chain and tape.

6   State any two angular methods of curve setting.

7   State any two uses of EDM.

8   State any two uses of Electronic Theodolite.

1   [Contd...

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PART - B

04×03=12

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

(2) *Each question carries THREE mark.*

9 (a) Define the terms Latitude and Departure of a survey line.

OR

(b) What are the advantages of setting out the curve using two theodolites ?

10 (a) What is an anallatic lens ? What are the advantages and

OR

(b) State the importance of GPS receivers.

11 (a) Calculate the perpendicular offsets at 20m interval along the tangents to set out first three pegs of a simple circular curve of 250m radius.

OR

(b) Given the point of intersection (PI) chainage as 2020 m. deflection angle = 60°, radius of curve 300m. find the chainages of point of commencement (PC) and point of tangency (PT).

12 (a) State any three functions of Total Station.

OR

(b) State any three components of GIS.

PART - C   04×05=20

Instructions :   (1) Answer any **FOUR** questions.
                    (2) Each question carries **FIVE** marks.

13 (a) From the data given below calculate the area of the traverse by the co-ordinates method.

Line	AB	BC	CD	DE	EA
Length (m)	402	398	430	490	274.50
Bearing	N60°45'E	S70°30'E	S22°30'W	N81°45'W	N16°11'W

OR

(b) Calculate the ordinates from a 150m long chord at 10m interval to set out a Simple circular curve of 8° (take length of standard chord as 30m).

14 (a) The Tacheometer was set up at station A and the   2+3=5
         following readings were obtained on a vertically
         held staff :

Instrument At	Staff At	Vertical angle	Stadia Readings (m)	Remarks
A	B.M	−2°18'	3.225, 3.550, 3.875	R.L of BM 437.655m
A	B	+8°36'	1.650, 2.515, 3.380	

Calculate the horizontal distance from A to B and the R.L of B, if the constants of the instrument were 110 and 0.4.

OR

(b) (i) State any SIX Applications of GPS in Civil   3
          Engineering.

     (ii) What is EDM and name three EDM $\frac{1}{2}+1\frac{1}{2}=2$

          instruments.

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

OR

(b) Two tangents intersect at chainage of 1500m and the deflection angle being 30°. Calculate all the necessary data for setting out a circular curve of radius 300m by the method of offsets from the chords produced, taking a peg interval of 30m.

16 (a) Mention any ten parts of a Total Station along with their function.

OR

(b) Explain briefly about the following related to Photogrammetry :

(i) Terrestrial Photographs 2

(ii) Aerial Photographs. 3