MODEL QUESTION PAPER

REVISION -2010 Reg.No: .....
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THIRD SEMESTER DIPLOMA IN ENGINEERING TECHNOLOGY---OCTOBER, 2011.

SURVEYING-II

(Common to CE, AR, QS, EN, WR)

Time -3 hours Max. Marks: 100

PART-A

(Answer all questions in one or two sentences. Each question carries 2 marks.)

1. Define line of collimation?
2. What is meant by Northing and southing?
3. What are the uses of Anallatic lens?
4. List different types of horizontal curves.
5. Define photogrammetry.

PART-B

(Answer any five questions. Each question carries 6 marks)

1. Explain clearly the procedure for measurement of horizontal angle by repetition method.
2. Write the procedure for measurement of bearing of traverse line by direct method.
3. Differentiate between stadia tacheometry and tangential tacheometry.
4. Explain the method of laying out a simple curve by offsets from long chord.
5. How will you perform the adjustment of plate level of theodolite?
6. Explain the working principle of EDM instrument.
7. Describe the procedure for computation of area of a closed traverse the given consecutive coordinates.

PART-C

Unit-I

III 1. Explain the terms;
a)Swinging the telescope b)Transiting
c)Changing the face d)Centering (8)
2. Explain the various methods for the prolongation of straight lines (7)

OR

IV 1. Draw the nest sketch of theodolite and mark the component part (10)
2. List the fundamental lines of theodolite. (5)

Unit-II

V 1. Explain how an angle can be set out in the field using a theodolite? (5)
2. In a theodolite survey the following details were noted and some of the Observations were found to be missing.

Line	Length	RB
AB	281.40	S 69° 11" E
BC	129.40	N 21 ° 49" W
CD	***	N 19 °34" W
DE	144.50	***
EA	168.70	S 74 ° 24" W

Calculate the missing data. (10)

OR

VI. 1. Describe theodolite traversing by the method of included angles (5)

2. The following are the latitude and departure of the sides of a closed traverse ABCD.

Line	Latitude (m)	departure(m)
AB	- 116.10	-44.40
BC	+6.80	+58.20
CD	+80.50	+17.20
DA	+28.80	-31.00

Compute the area of the traverse by independent co ordinate method (10)

UNIT III

VII. 1. Write the procedure for measuring the vertical angle using theodolite (5)

2. A tacheometer was set up at an intermediate point between two stations A and B and the following observations were made on a vertically hold staff

Staff station	Vertical angle	Staff reading
A	+ 4°30'	1.605, 2.400, 3.195
B	- 2°45'	0.805, 1.345, 1.855

The instrument is fitted with an analytical lens. Compute the length AB And R.L of point B if R.L of a is 500.000m (10)

OR

VIII 1. Derive the expression for determining the elevation of an object, if the base of the object is accessible (5)

2. Find the elevation of the top of a tower from the following data

Instrument station	Reading on BM	Angle of elevation	Remark
P	0.765	20°30'	RL of BM = 800.50m
Q	1.410	12°40'	Distance PQ= 30m

Station P and Q and the top of the tower are in the same vertical plane (10)

UNIT IV

IX. 1. A simple curve has a radius of 450m and a long chord of length 200 Calculate the offset to the curve from the long chord at 20m intervals (5)

2. Write the principle used in EDM instruments (5)

3. Explain remote sensing (5)

OR

X. 1. Explain different types of curves (8)

2. What are the different applications of GIS in Civil Engineering (7)

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