

(DCE 223)

B. Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the End of Second Year)

Civil Engineering

Paper - III : SURVEYING - II

Time : 3 Hours

Maximum Marks : 75

Answer question No.1 compulsory

(15 × 1 = 15)

Answer ONE question from each unit

(4 × 15 = 60)

- 1) a) What is the use of Total Station?
- b) What is the principle of EDM?
- c) What is Departure?
- d) What is the use of planimeter?
- e) What are consecutive coordinates?
- f) What is Tacheometric Surveying?
- g) Name the instrument used to find out irregular areas of maps.
- h) What is degree of a curve?
- i) From which point, a curve originates?
- j) What is Base Line?
- k) What is the principle of Triangulation?
- l) Why the very first tangent of a curve is called 'Back Tangent' ?
- m) What is axis of plate level?

n) What do you mean by omitted measurements?

o) What is an analatic lense?

UNIT – I

2) a) Write in detail about total station with sketches.

b) What is basic principle of E.D.M.? What are the instrumental error in E.D.M.?

OR

3) Write about various types of omitted measurements and procedures to get missing data.

UNIT - II

4) The following offsets were taken from a chainline to the boundary of an area at regular intervals of 20m.

2.5, 1.2, 3.1, 3.5, 6.2, 4.1, 6.9, 4.4, 4.8, 1.6.

Compute the area enclosed in between by using Simpson's rule.

OR

5) The following are the levels along the central line of a railway track.

Chainage	0	50	100	150	200	250	300
R.L.	13.50	12.45	12.15	11.55	10.95	12.05	10.80

If the formation of the track is at a constant level of 10.00, compute the volume of cutting if the width at formation in 10m and the side slopes are 1.5 : 1.

UNIT - III

6) a) A Tacheometer with multiplying constant 100 and additive constant 0.3 was set up at a station O and the following results was observed by at keeping the staff vertical. Calculate the horizontal distance between O and P and the reduced level of P.

Inst Station	Staff Station	Staff readings	Ver. Angle	Remarks
O	B.M.	1.875, 2.150, 2.425	+6°	R.L. of BM=152.6m
	P	1.650, 1.800, 1.950	-10°30'	

OR

7) Find the elevation of the top of the flag staff from the following data.

Inst. Station	Reading on B.M.	Angle of Elevation	Remarks
A	0.862	18°36'	RL of BM = 421.380 m
B	1.222	10°12'	Distance AB = 50 m

Stations A,B and top of the flag staff are in a same vertical plane.

UNIT - IV

8) Write about the four Linear methods of setting out a simple circular curve?

OR

9) Write in detail about principle and classification of triangulation with sketches.

