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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR
(AUTONOMOUS)****B. Tech II Year I Semester (R16) Regular Examinations November 2017****SURVEYING
(CIVIL ENGINEERING)**

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 X 12 = 60 Marks)

UNIT-I

- 1 Following bearings were observed with a compass for a closed traverse. Correct the bearing for local attraction, if any.

Line	Fore Bearing	Back Bearing
AB	16°45'	198°00'
BC	224°30'	47° 30'
CD	207°15'	25°45'
DA	67 ⁰ 45'	247 ⁰ 30'
EA	155°15'	332° 45'

12M

OR

- 2 State three-point problem in plane tabling. Describe its solution by trial and error method.

12M

UNIT-II

- 3 The following staff readings were observed successively with level, the instrument has been moved forward after the second, fourth and eighth readings: 0.875, 1.235, 2.310, 1.385, 2.930, 3.125, 4.125, 0.120, 1.875, 2.030 and 3.765. The first reading was taken with the staff held upon a benchmark of elevation 132.135m. Enter the readings in level book-form and reduce the levels. Apply the usual checks. Find also the difference in level between the first and the last points.

12M

OR

- 4 a Define contour. State the various characteristics of contour lines
b With the help of neat sketches explain the direct method of locating contours.

6M

6M

UNIT-III

- 5 a How would you determine the constants K and C of a Tacheometer?
b How do you measure horizontal angle between two points with the help of a theodolite by repetition method?

6M

6M

OR

- 6 Determine the R.L of the top of a chimney from the following data. Station A and B are in line (241.980)

Instrument at Station	Reading on BM (m)	Vertical Angle	R.L of BM
A	1.265	18°48'20"	R.L of BM = 242.830m AB=60 m
B	1.625	10°12'40"	

12M

UNIT-IV

- 7 a Draw a neat sketch and show the various elements of a simple circular curve. 6M
 b What is a transition curve and where is it used? How will you determine the length of a transition curve? 6M

OR

- 8 Calculate the tangent length, length of curve, apex, distance and middle ordinate to connect straight having angle of deflection 80^0 by a circular curve of 440m radius 12M

UNIT-V

- 9 a What are the errors in EDM. 4M
 b What are the applications of Electronic distance measurements? What are the main classes of EDM instruments? 8M

OR

- 10 Explain the data acquisition and interpretation of an ideal remote sensing system. 12M

***** END *****