Reg. No. :

Question Paper Code: 31146

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Fourth Semester

Civil Engineering

01UCE406 - SURVEYING - II

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What is meant by curve ranging?

2. Define the term degree of curve.

3. State the principle of triangulation.

4. State the principle of signals used in triangulation.

5. What are different classifications of error?

6. Define the terms probable value and probable error.

7. Define scale.

8. What is an EDM?

9. List out any six methods in location of soundings.

10. What is azimuth?

PART - B (5 x 16 = 80 Marks)

11. (a) Explain with neat sketches the different types of horizontal curve.   (16)

Or

(b) Explain the setting out of transition curve by offset and angles method.   (16)

12. (a) (i) Explain in detail about the different triangulation systems with neat sketches. (10)

(ii) Explain briefly the different aspects of fieldwork in triangulation. (6)

Or

(b) Explain any two mechanical solutions and one graphical solution to three point problem. (16)

13. (a) Explain the general principles of least squares. (16)

Or

(b) Form the normal equation for X_1, Y_1 & Z in the following equations with respective weights

$3x + 3y + z–4 = 0$ wt – 2
$x + 2y + 2z – 6 = 0$ wt – 3
$5x + y + 4z – 21 = 0$ wt – 1 (16)

14. (a) (i) Summarize the care and maintenance of total station instruments. (10)

(ii) Discuss about the modern positioning system. (6)

Or

(b) Explain the types of EDM instruments. (16)

15. (a) Determine the azimuth and altitude of a star from the following data (16)
  1.) declination of the star = $20^o 30'$
  2.) hour angle of star = $42^o 6'$
  3.) latitude of observation = $50^o N$

Or

(b) Elaborate about the equipments needed for sounding. (16)

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