

BE End Semester Examination April/May 2011
Civil Engineering branch
CE285 Surveying II, Regulation 2004
Semester IV

Marks: 100

Time: 3 hours

(20)

Answer all questions
Part A (2 x 10 = 20 marks)

1. Explain Subtense method and its accuracy
2. Explain Advantages of reciprocal observation in trigonometric leveling
3. What do you mean by Geographic and plane coordinate system
4. Explain the use of Total station
5. What do you mean by Accuracy and precision in survey observations
6. Explain True and most probable values
7. Explain Celestial sphere
8. Explain the use of Nautical almanac
9. Explain the application of Cartography
10. Explain the importance of Cadastral surveying

Part B (5 x 16 = 80 marks)

- 11(i) Explain refraction and curvature corrections. (8)
(ii) Calculate the sun's azimuth and hour angle at sunset at a place in latitude $42^{\circ}30'N$, when its declination is (a) $22^{\circ}12'N$ and (b) $22^{\circ}12'S$. (8)

- 12(a) (i) Explain the principles and application of electronic distance measurement. (8)
(ii) Explain the various types of EDM (8)

(OR)

- (b) (i) What do you mean by Soundings? (8)
(ii) Describe briefly the three-point problem and strength of fix in hydrographic surveying. (8)

- 13(a) (i) Explain briefly Photogrammetric procedure for mapping. (8)
(ii) Explain the terms (1) Parallax measurement (2) Stereo pair
(3) Stereoscope (4) Photo mosaic (2x4=8)

(OR)

- (b) Find the difference in level between two points A and B and the refraction correction from the following data.

Horizontal distance between A and B	= 6882.384 m
Angle of elevation of B at A	= $1^{\circ}50'20''$
Angle of depression of A at B	= $1^{\circ}51'10''$
Height of signal at A	= 4.145 m
Height of signal at B	= 3.597 m
Height of instrument at A	= 1.463 m
Height of instrument at B	= 1.554 m

- 14 (a) (i) Explain concept of assigning Weight to an observation. (6)
(ii) Adjust the following angles of the triangle ABC (10)