

Name _____ Surname _____ Student ID _____ Seat number _____



King Mongkut's University of Technology Thonburi

Final Examination

Semester 2 Academic Year 2014

CVE 224 SURVEYING PROJECT

2nd Year International Program

Date: Thursday 18 May 2015

Time 13.00 - 16.00

Instructions:

1. There are 1 questions, total of 5 pages (includes cover).
2. All answers have to use 3 decimal number.
3. Write your answers in the question sheets **ONLY**.
4. An approved calculator is **allowed** in the examination room.
5. **Not allowed** any documents or textbooks in the examination room.

Assistant Professor Theera Laphitchayangkul

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Thongchai Phothong

(Tel. 0-2470-9135)

This examination paper has been approved by the Department of Civil Engineering

A handwritten signature in black ink, appearing to read 'S. Leelataviwat', is written over a horizontal dotted line.

(Associate Professor Dr. Sutat Leelataviwat)

Head of the Civil Engineering Department

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1. Table 1, 2 and 3 show surveying data included leveling, horizontal traverse and detail surveying.
Find the answer of questions 1.1 to 1.4.

Table 1 Leveling data

Station	B.S.	F.S.	Elevation (m.)
A	0.232	-	55.482
T.P.1	0.503	3.892	
T.P.2	0.212	3.524	
B	0.246	3.302	
T.P.3	2.169	0.257	
C	2.895	0.678	
T.P.4	2.912	0.202	
D	-	1.423	

Table 2 Coordinate data

Side	N (m.)	E (m.)
A	1000	1000
B	967.457	884.984
C	909.357	898.993
D	933.350	1022.448

Table 3 Detail surveying

Horizontal Angles				Distance (m.)
Station	From	To Point	Angle (clockwise)	Station to Point
A	B	1	$327^{\circ}40'00''$	3.30
B	C	2	$287^{\circ}03'50''$	0.95
C	D	3	$49^{\circ}31'10''$	5.00
D	A	4	$50^{\circ}52'00''$	2.20

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1.1 From the Table1 find elevation of points A, B, C and D. (10 marks)

Station	B.S.	H.I.	F.S.	Elevation

1.2 From the Table 2 calculate azimuth of each lines of the traverse and checks the summation of internal angle. (10 marks)

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1.4 From all data draws the picture of all points. (5 marks)

