REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF MINERALS AND ENERGY
EXAMINATION FOR THE MINE SURVEYORS CERTIFICATE OF COMPETENCY

DATE: 18 April 2008 TOTAL MARKS:**100**
TIME: 12:30 to 15:30 (3 Hours) TO PASS: **50**

SURVEY III

Note:
(1) Work to 1 second of arc and 0,001m.
(2) Functions must be shown to six (6) decimal places.
(3) **All steps** and **checks** must be shown.
(4) All **calculations** and **answers** to be **shown clearly.**
(5) Sketch are not drawn to scale and attached herewith.
(6) The make and model number of your calculator **must** be written on the front cover of your answer book.

'g G is the starting point from which an ore pass raise at 50 degrees has been started in the direction GJ. Peg H is a point in the crosscut above, from which an ore pass winze at 50 degrees is to be sunk to meet the ore pass raise from Peg G at a point K in the line GJ.

Beacons A, B and C are on surface while W is a plumb wire in a vertical shaft suspended down the shaft to hang past Peg E on the station. ADW is a straight line.

Given:

POINT	Y – CO ORD	X – CO ORD	ELEVATION
A	-6 443.234	7 583.330	
B	-6 685.773	6 728.782	
C	-7 560.680	6 998.039	
E	-7 282.874	7 412.090	-1 417.688
H	-7 514.735	7 171.361	-1 062.350

'bserved horizontal angles:

ADB = 62:59:53
BDC = 79:03:33
WEF = 92:11:10 Horizontal Distance E to F = 64.207m
EFG = 153:53:23 Horizontal Distance F to G = 72.609m
Horizontal Distance to W = 25.137m
Direction G to J = 269:46:37

POINT	B.S.	I.S.	F.S.
Peg E	2.392		
1		1.564	
2		1.364	
3		1.968	
4		1.640	
5		1.341	
6		1.432	
7		0.532	
8		0.348	
9		0.842	
10		0.904	
Peg G			0.200

Note: Inverted staff readings taken at Peg E and Point 6 and Peg G.

Calculate:

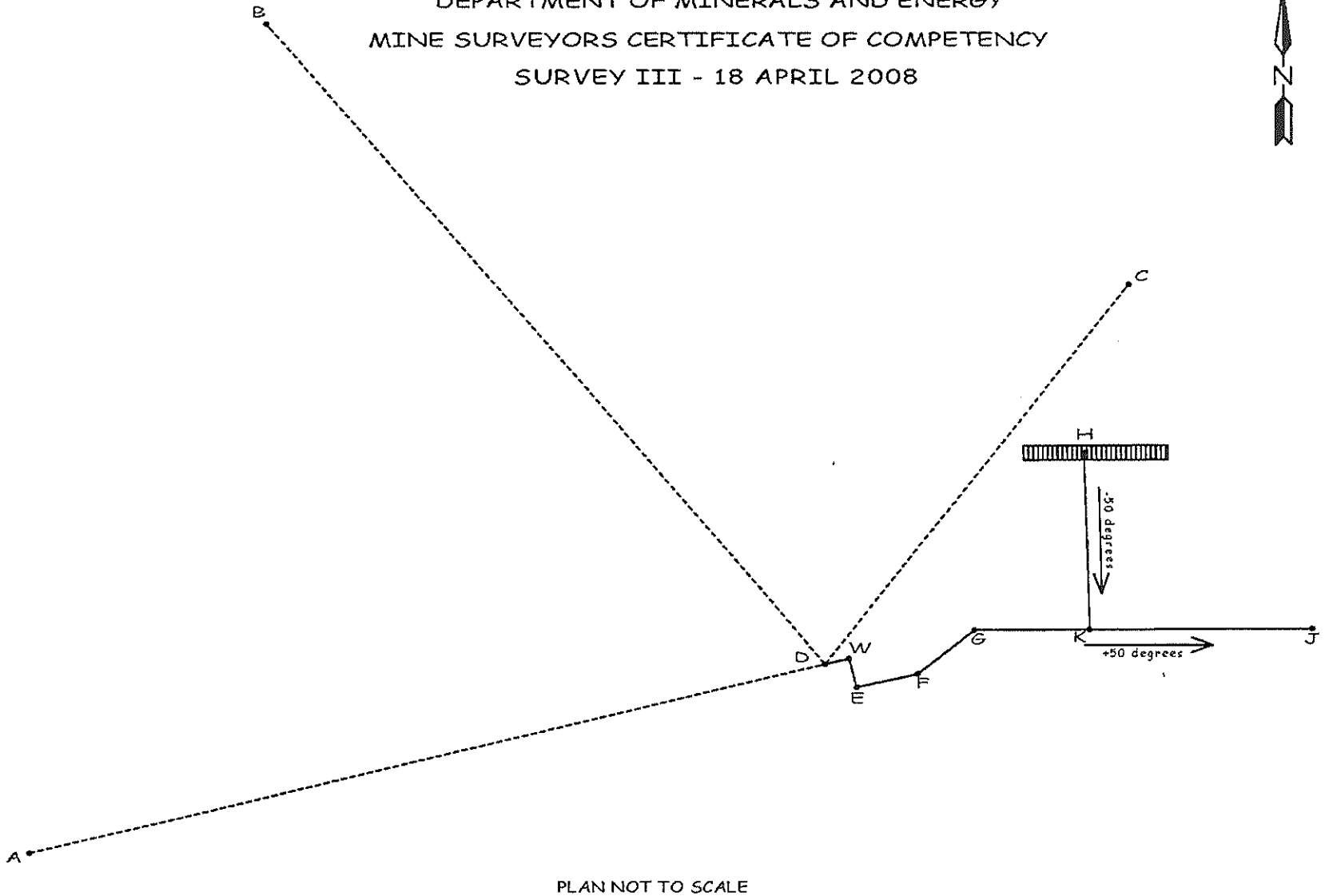
1. The co ordinates and elevation of the holing point K.
2. The incline length of the winze H to K.

[100 marks]

DEPARTMENT OF MINERALS AND ENERGY

MINE SURVEYORS CERTIFICATE OF COMPETENCY

SURVEY III - 18 APRIL 2008



PLAN NOT TO SCALE