



PROGRAM : BACCALAUREUS INGENERIAE
MECHANICAL ENGINEERING

SUBJECT : **Graphical Communication 1A**

CODE : **GKM 1A11 and GKMEEA1**

DATE : May 2018

DURATION : 3 hours

WEIGHT : 50 : 50

TOTAL MARKS : 100

EXAMINER : DR F F PIETERSE

MODERATOR : PROF RL LAUBSCHER

NUMBER OF PAGES : 2 PAGES A4 AND 1 PAGE A3

INSTRUCTIONS

REQUIREMENTS : ANSWER ON A3 PAPER PROVIDED

INSTRUCTIONS TO CANDIDATES:

PLEASE ANSWER ALL THE QUESTIONS.

This paper consists of 2-A4 and 1-A3 page.

QUESTION 1: (60)

Given: Figure 1 shows an isometric projection of a **Shaft guide**.

Question: Draw a detail (working) drawing of the Shaft guide (Figure 1) in third-angle orthographic projection by using:

1. Scale 1:1.
2. Draw a **right view**, a **top view** and a **full-section front view X-X** (Front view on Arrow A).
3. Partial break-out sections can be used to add dimensions.
4. Projection symbol and dimensions according to SABS 0111 specifications.
5. Show all hidden detail.

QUESTION 2: (14)

Show the intersection between the triangle ABC and surface MNOP as well as the correct visibility. This problem must be solved using the projection (cutting plane) method.

QUESTION 3: (10)


Given point A of a line AB. **Point B** is 5 meters right of point A, 1.5 meters in front of point A and 1.2 meters under point A. Determine the true length, point view and slope of the line BA if a scale of 1: 100 is used. Label all points.

QUESTION 4: (10)

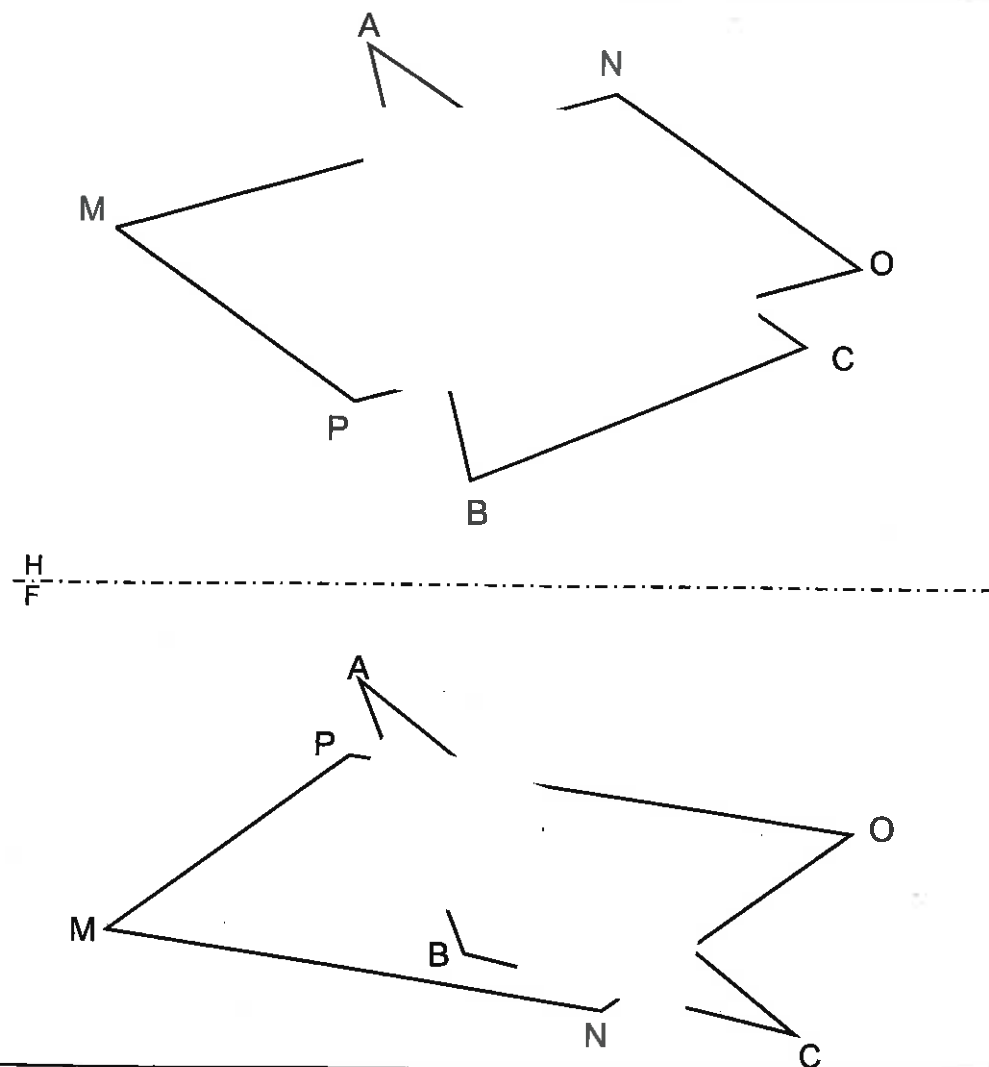
Determine the dihedral angle between planes ADC and CBD.

QUESTION 5: (6)

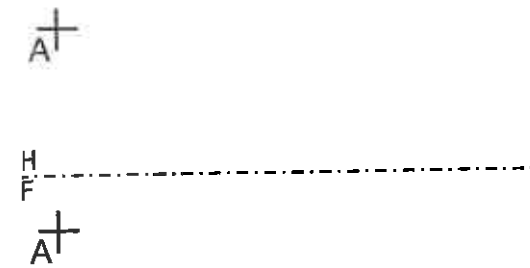
A pipeline 1-2 is 240 meters long and has a bearing of N50°W with a downgrade of 30%. Scale: 1:4000. Find the front and top views of the pipeline 1-2.

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PROJECTION :	GKM No. :	DRAWN BY / GETEKEN DEUR :		DWG. / TASK / TAAK NO. Exam GKM 1A (2018)		
		STUDENT / STUDENTE No.		DATE / DATUM :	SCALE / SKAAL:	SHEET BLAAT 1 OF VAN 1

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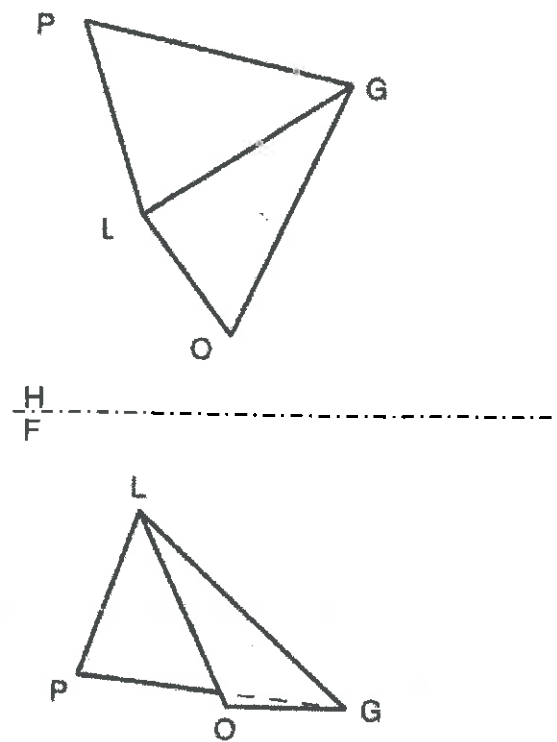
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True length of line _____

Slope of the line _____

4



Dihedral angle: _____

5

