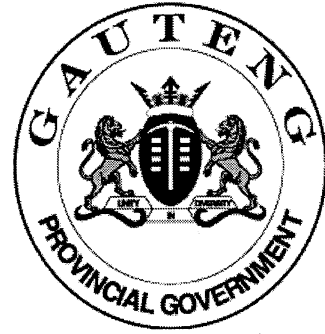


**SENIOR CERTIFICATE  
EXAMINATION  
*SENIORSERTIFIKAAT-EKSAMEN***



**FEBRUARY / MARCH  
*FEBRUARIE / MAART***

**2006**

**TECHNICAL DRAWING  
*TEGNIESE TEKENE***

**Second Paper / *Tweede Vraestel***

**SG**

**711-2/2**

TECHNICAL DRAWING/TEGNIESE TEKENE SG  
Paper 2/Vraestel 2



711 2 2

SG

**Cover + 6 pages  
*Voorblad + 6 bladsye***

**X05**



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# 2005

## EXAM NUMBER / EKSAMENNOMMER

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**SENIOR CERTIFICATE EXAMINATION  
SENIORSERTIFIKAAT-EKSAMEN**

**REQUIREMENTS:**

- Drawing equipment

**INSTRUCTIONS:**

- Answer ALL questions on the answer sheets provided.
- Write your examination number on EACH answer sheet.
- Approximate any dimensions not given.
- At the end of the session, all answer sheets must be stapled together at the TOP LEFT-HAND corner in the correct sequence
- All unused answer sheets must be handed in.

**BENODIGHEDE:**

- Tekeninstrumente

**INSTRUKSIES:**

- Beantwoord ALLE vrae op die gegewe antwoordvelle.
- Skryf jou eksamennommer op ELKE antwoordvel.
- Benader enige afmetings wat nie gegee is nie.
- Aan die einde van die sessie moet AL die antwoordvelle in die korrekte volgorde in die BOONSTE LINKERKANTSTE hoek vasgekram word.
- Alle ongebruikte antwoordvelle moet ingehandig word.

**OCTOBER / NOVEMBER  
OKTOBER / NOVEMBER**

**TECHNICAL DRAWING SG  
TEGNIесе TEKENE SG**

SECOND PAPER / TWEDE VRAESTEL

ANSWER BOOK / ANTWOORDBOEK

TIME: 3 HOURS / TYD: 3 UUR

MARKS: 150 / PUNTE: 150

711-2/2 L

5 PAGES / 5 BLADSYE



QUESTION VRAAG	MARKS PUNTE	INITIAL PARAFEER
1		
2		
3		
4		
TOTAL TOTAAL		
CONTROLLER KONTROLEUR		

**QUESTION 1**

The given figure shows an isometric view of a casting. Draw to a scale of 1:1 and in third-angle orthographic projection the following views of the casting:

- 1.1 A front view as seen in the direction of the arrow
- 1.2 A right view
- 1.3 A top view
- 1.4 Indicate the projection symbol representing third-angle orthographic projection in the space provided.

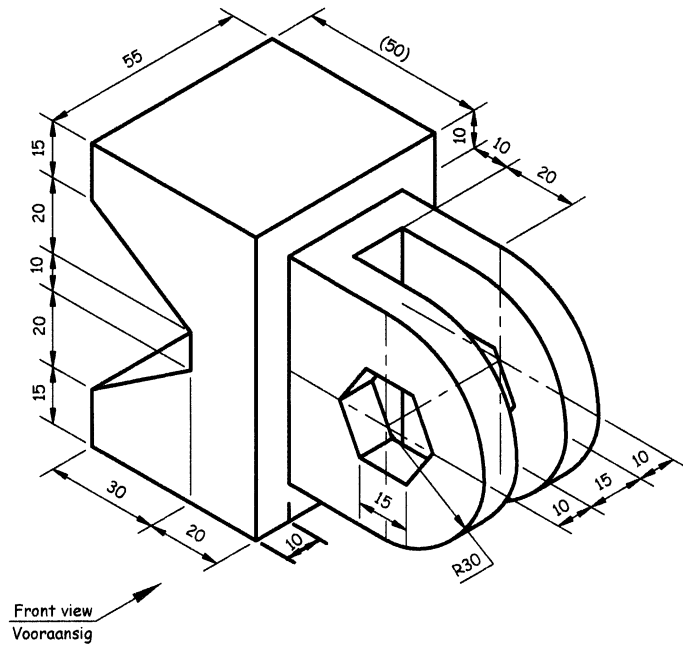
ALL hidden detail must be shown.  
No dimensions are required.

**VRAAG 1**

Die gegewe figuur toon 'n isometriese aansig van 'n gietstuk. Teken volgens 'n skaal van 1:1 en in derdehoekse ortografiese projeksie die volgende aansigte van die gietstuk:

- 1.1 'n Vooraansig vanuit die rigting wat deur die pyl aangedui word
- 1.2 'n Regteraansig
- 1.3 'n Boaansig
- 1.4 Toon die projeksiesimbool vir derdehoekse ortografiese projeksie in die ruimte wat daarvoor voorsien word.

ALLE verborge detail moet getoon word  
Geen dimensies word verlang nie.



SYMBOL / SIMBOOL

EXAMINATION NUMBER:  
EKSAMENNOMMER:

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TECHNICAL DRAWING STANDARD GRADE  
TEGNIесе TEKENE STANDAARDGRAAD

SG 711 - 2/2 L  
SG 711 - 2/2 L

ANSWER SHEET 1  
ANTWOORDVEL 1

Placing Plasing	-3		
Presentation Aanbieding	-2		
Accuracy Akkuraatheid	-2		
Front view Vooraansig	7		
Top view Bo-aansig	7		
Right view Regteraansig	9		
Symbol Simbool	2		
TOTAL TOTAAL	25		

**QUESTION 2**

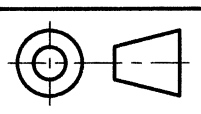
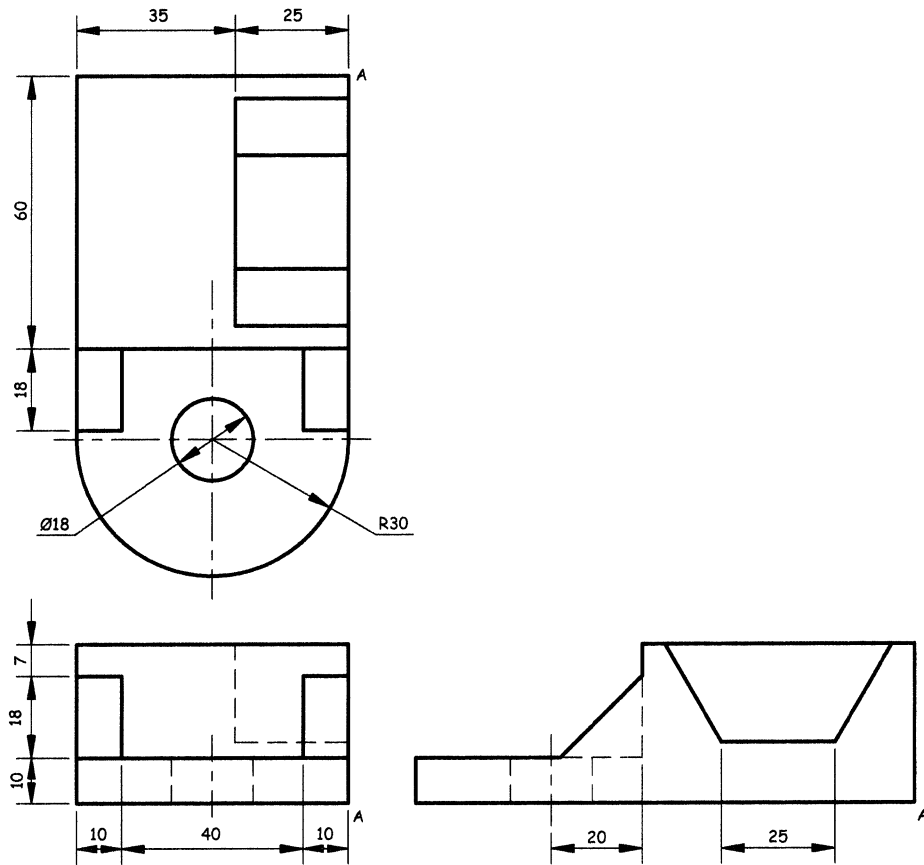
The given figure shows three views of a casting in third-angle orthographic projection. Draw to a scale of 1:1 a neat isometric view of the casting.

Use point "A" to start the drawing.

**VRAAG 2**

Die gegewe figuur toon drie aansigte van 'n gietstuk in derdehoekse ortografiese projeksie. Teken volgens 'n skaal van 1:1 'n netjiese isometriese aansig van die gietstuk.

Gebruik punt "A" as beginpunt.



Placement Plasing	-3		
Base Basis	5		
Hole & Curve Gat & Kurwe	8		
Ribs Ribbe	4		
Hexagon Seskant	6		
Linework Lynwerk	2		
<b>TOTAL TOTAAL</b>	<b>25</b>		

EXAMINATION NUMBER:  
EKSAMENNOMMER:




TECHNICAL DRAWING STANDARD GRADE  
TEGNIESE TEKENE STANDAARDGRAAD

SG 711 - 2/2 L  
SG 711 - 2/2 L

ANSWER SHEET 2  
ANTWOORDVEL 2

**QUESTION 3**

Three views of a dwelling that has been developed as a project of 100 low-cost houses in Mamelodi, Tshwane-East, are shown. Draw a neat two-point perspective view of the dwelling.

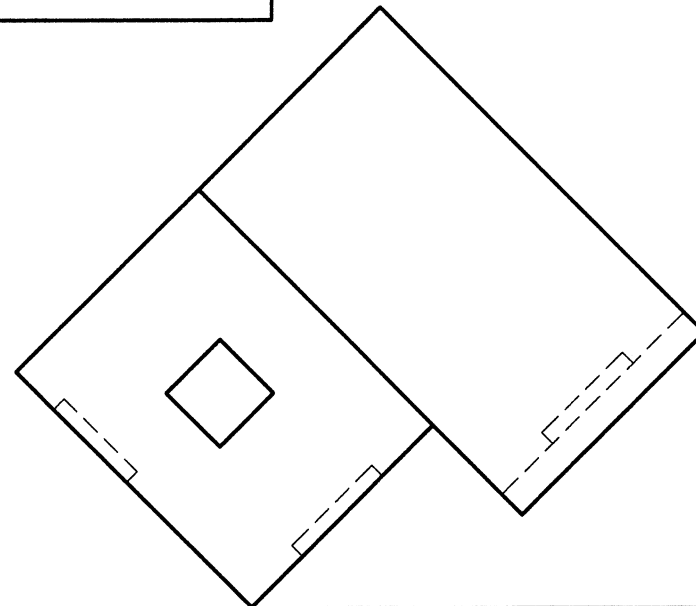
*No hidden detail is required. Ignore wall thickness.*

**VRAAG 3**

Drie aansigte van 'n woning wat deel is van 'n projek van 100 laekoste-huise in Mamelodi, Tshwane-Oos, word getoon. Teken 'n netjiese tweepuntperspektief-aansig van die woning.

*Geen verborge detail hoef getoon te word nie. Ignoreer muurdikte.*

Perspective view Perspektief-aansig	20		
Vanishing points Verdwynpunte	2		
Accuracy Akkuraatheid	3		
<b>TOTAL TOTAAL</b>	<b>25</b>		

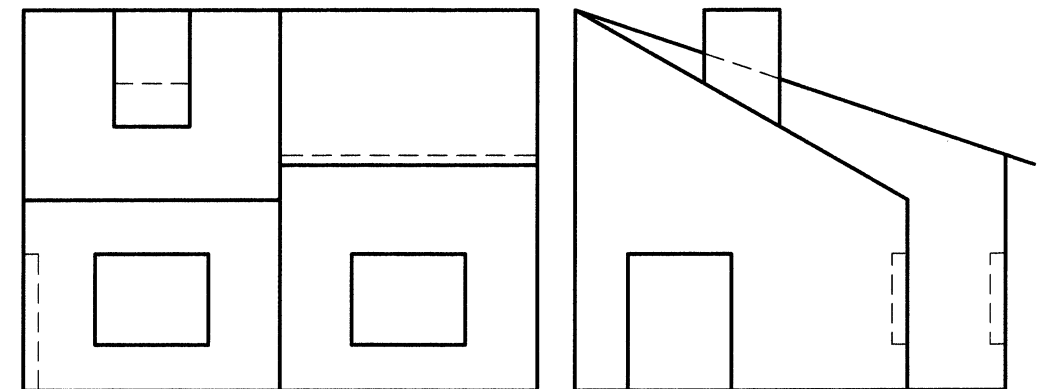


PP/PV

HL

GL

SP



EXAMINATION NUMBER:  
EKSAMENNOMMER:

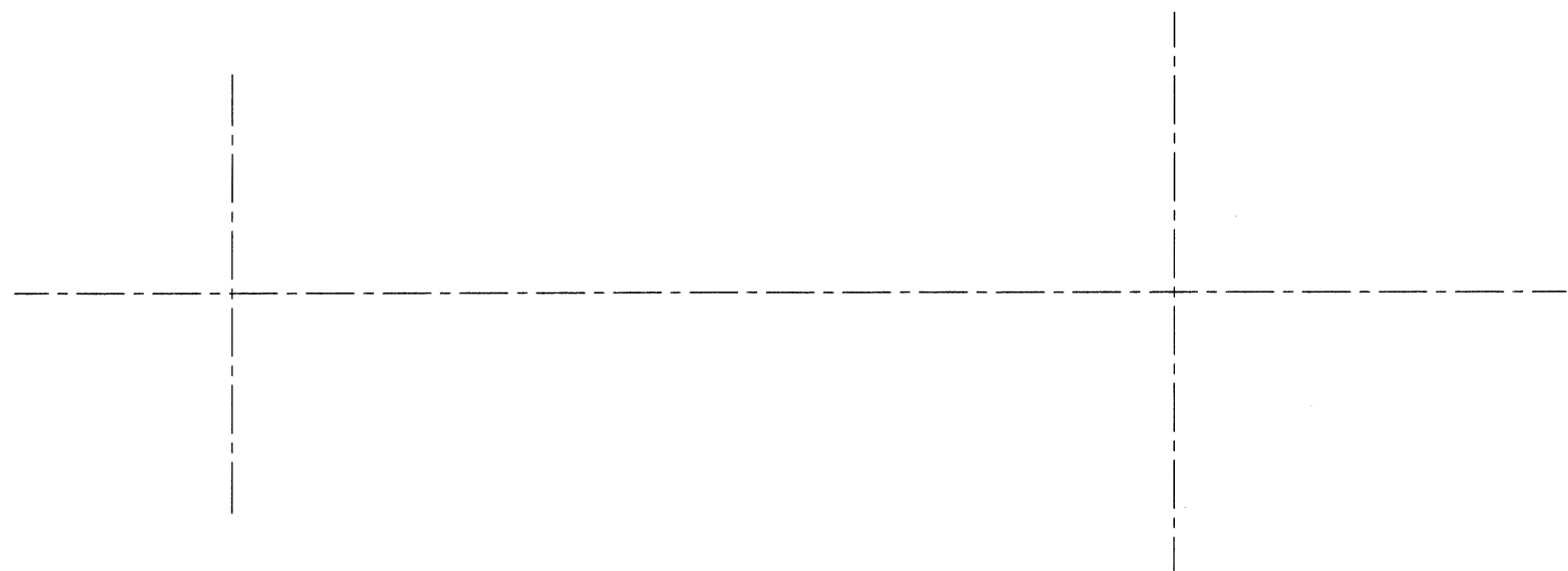



TECHNICAL DRAWING STANDARD GRADE  
TEGNIесе TEKENE STANDAARDGRAAD

SG 711 - 2/2 L  
SG 711 - 2/2 L

ANSWER SHEET 3  
ANTWOORDVEL 3

FRONT VIEW VOORAANSIG			
PART A	10		
PART B	9		
PART C	4		
PART D	9		
PART E	8		
PART F	2		
PART G	5		
TOTAL / TOTAAL	47		
TOP VIEW BO-AANSIG			
PART A	5		
PART B	3		
PART D	2		
PART F	1		
PART G	4		
TOTAL / TOTAAL	15		
47 + 15 = 62	62		
ASSEMBLY SAMESTELLING	3		
DIMENSIONS AFMETINGS	3		
LINEWORK LYNWERK	3		
TITLE TITEL	2		
SYMBOL SIMBOOL	2		
TOTAL TOTAAL	75		



TITLE BLOCK / TITELBLOK	
SYMBOL / SIMBOOL	
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EXAMINATION NUMBER:  
EKSAMENNUMMER:

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TECHNICAL DRAWING STANDARD GRADE  
TEGNIесе TEKENE STANDAARDGRAAD

SG 711 - 2/2 L  
SG 711 - 2/2 L

ANSWER SHEET 4  
ANTWOORDVEL 4

**QUESTION 4**

Figure 4.1 shows a half-sectional exploded isometric view of a **SWIVEL ARM**.  
Figure 4.2 shows the components of the **SWIVEL ARM**.

Use the given centre lines on **ANSWER SHEET 4** to draw to a scale of 1:1 and in first-angle orthographic projection the following assembled views:

- 4.1 A full sectioned front view on A-A. Show THREE faces of the nut by using the construction method.
- 4.2 An outside top view. No hidden detail is required.
- 4.3 Insert THREE important dimensions in each view.
- 4.4 Print the title and scale in the title block.
- 4.5 Show the projection symbol for the projection system used in the space provided.

PARTS LIST		
ITEM	NAME	QUANTITY
A	BRACKET	1
B	SWIVEL-ARM	1
C	BUSH	1
D	PIVOT PIN	1
E	TAPER PIECE	1
F	WASHER	1
G	M16 NUT	1

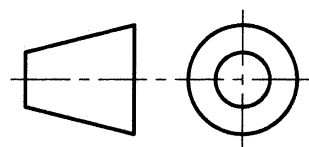
**VRAAG 4**

Figuur 4.1 toon 'n halfsnit-, uitskuif-isometriese aansig van 'n **SWAAI ARM**.  
Figuur 4.2 toon die komponente van die **SWAAI ARM**.

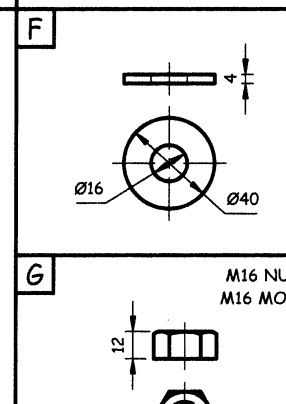
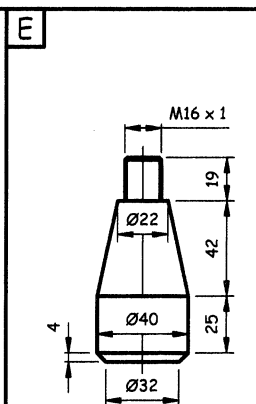
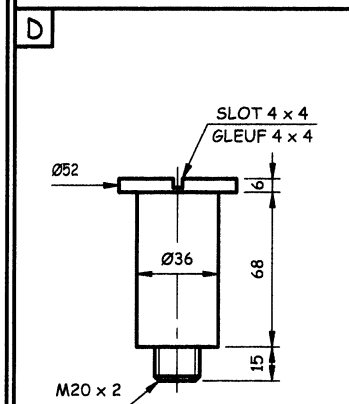
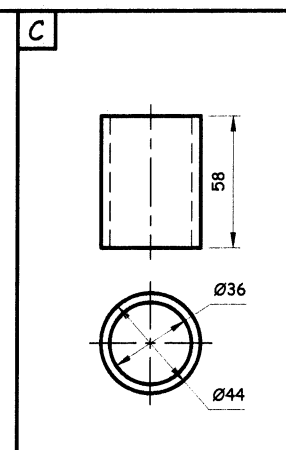
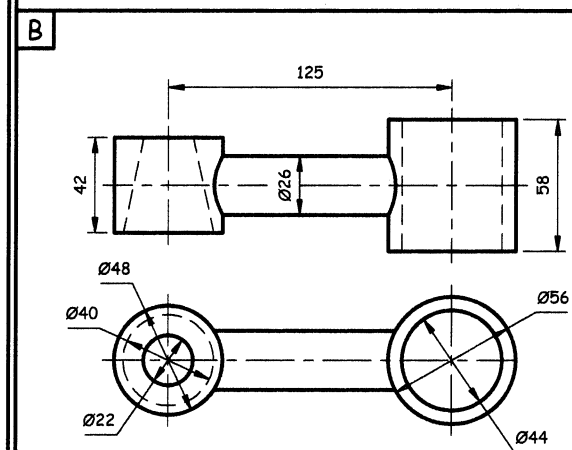
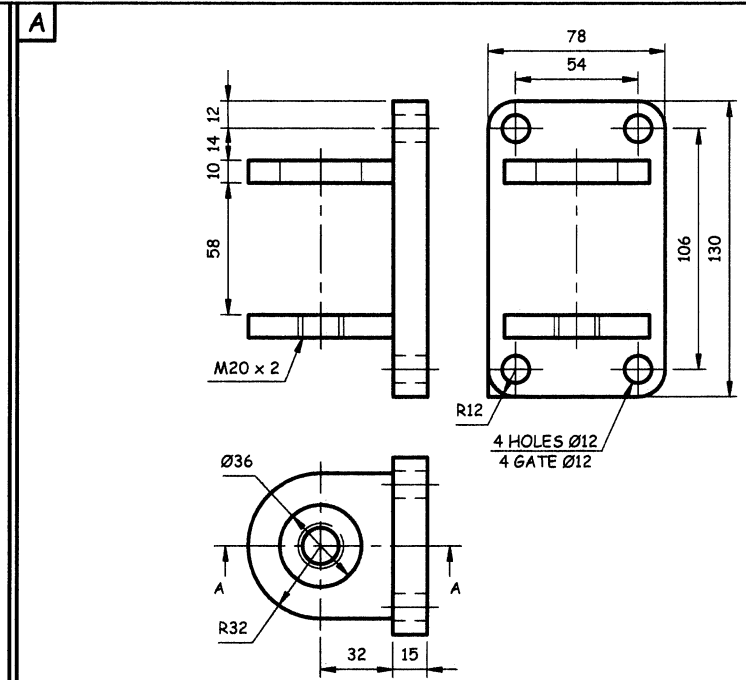
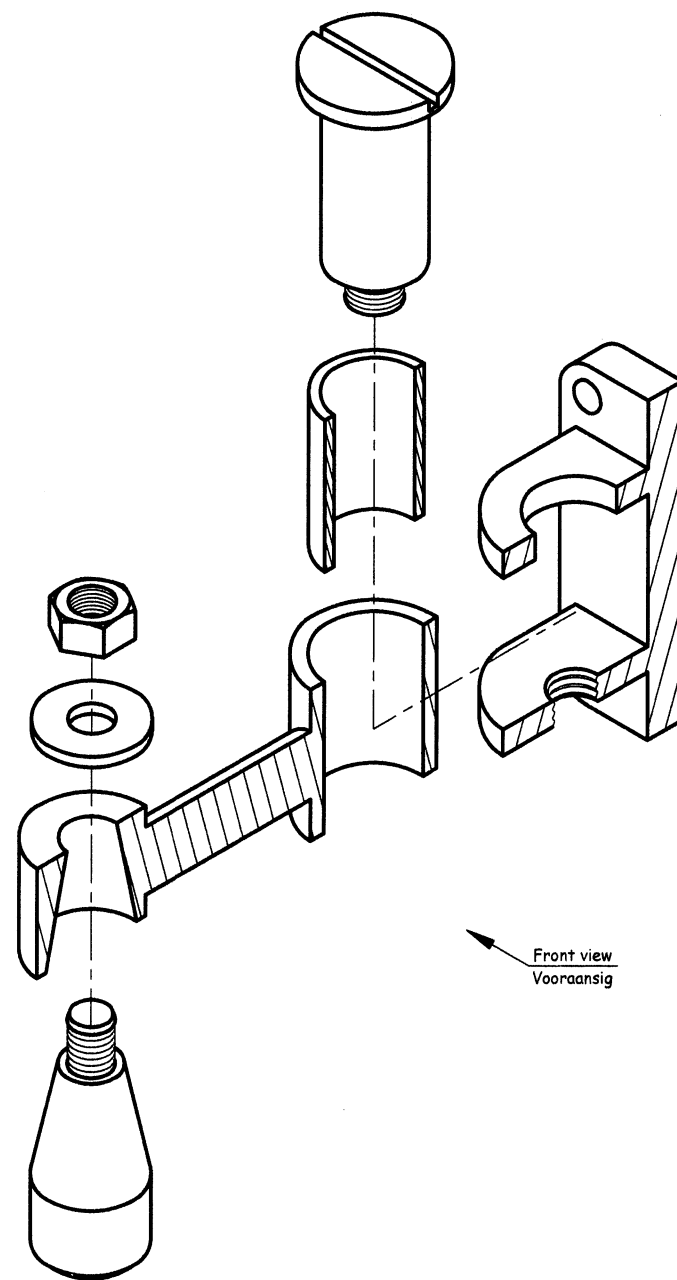
Gebruik die gegewe senterlyne (hartlyne) op **ANTWOORDVEL 4** en teken volgens 'n skaal van 1:1 en in eerstehoekse ortografiese projeksie die volgende saamgestelde aansigte:

- 4.1 'n Volsnit-vooraansig op A-A. Toon DRIE vlakke van die moer met die konstruksiemetode.
- 4.2 'n Buite bo-aansig. Geen verborge detail hoef getoon te word nie.
- 4.3 Toon DRIE afmetings in elke aansig.
- 4.4 Drukskryf die titel en skaal in die blok daarvoor voorsien.
- 4.5 Toon die projeksiesimbool vir die projeksiesistelsel in die ruimte wat daarvoor voorsien is.

ONDERDELE LYS		
ITEM	NAAM	HOEVEELHEID
A	STUT	1
B	SWAAI-ARM	1
C	BUS	1
D	SKARNIERPEN	1
E	TAPSE PASSTUK	1
F	WASTER	1
G	M16-MOER	1



**FIG 4.1**



**FIG 4.2**

SWIVEL ARM  
SCALE 1:1

SWAAI-ARM  
SKAAL 1:1

EXAMINATION NUMBER: