GAUTENG DEPARTMENT OF EDUCATION
GAUTENGSE DEPARTEMENT VAN ONDERWYS

SENIOR CERTIFICATE EXAMINATION
SENIORSERTIFIKAAT-EKSAMEN

OCTOBER / NOVEMBER
OKTOBER / NOVEMBER

2006

TECHNICAL DRAWING
TEGNIESE TEKENE

(Second Paper : Drawings)
(Tweede Vraestel : Tekene)

HG

711-1/2

Cover + 6 pages
Voorblad + 6 bladsye

GAUTENG

DEPARTMENT OF EDUCATION

SENIOR CERTIFICATE EXAMINATION

TECHNICAL DRAWING HG 711-1/2 U
(Second Paper : Drawings)

TIME : 3 hours

MARKS : 200

GAUTENGSE

DEPARTEMENT VAN ONDERWYS

SENIOR SERTIFIKAATEKSAMEN

TECHNICAL DRAWING HG 711-1/2 U
(Tweede Vraestel : Tekene)

TYD : 3 uur

PUNTE : 200

INSTRUCTIONS:

1. Answer ALL the questions.
2. Answer all questions on the answer sheets provided.
3. Any dimensions not given, may be assumed.
4. Write your examination number on all answer sheets.
5. Unless otherwise stated use a scale of 1:1.
6. The use of coloured lead pencils will be penalised.
7. Hand in all the answer sheets whether they have been used or not. Staple the answer sheets in numerical order.
8. The paper consists of 6 pages including the cover page.

INSTRUKSIES:

1. Beantwoord AL die vrae.
2. Beantwoord al die vrae op die gegewe antwoordvelle.
3. Benader enige afmeting wat nie gegee word nie.
4. Skryf jou eksamennommer op al die antwoordvelle.
5. Tensy anders vermeld, gebruik 'n skaal van 1:1.
6. Die gebruik van gekleurde lood sal gepenaliseer word.
7. Handig al die antwoordvelle in, selfs al is dit nie gebruik nie. Kram die antwoordvelle in numeriese volgorde vas.
8. Die vraestel bestaan uit 6 bladsye, insluitende die voorblad.

FOR OFFICIAL USE ONLY SLEGS VIR AMPTELIKE GEBRUIK			
QUESTION VRAAG	MARKS PUNTE	MODERATED MODERATOR	MAXIMUM MAKSIMUM
1			25
2			35
3			40
4			100
TOTAL TOTAAL			200

CONTROLLER KONTROLEERDER			

EXAMINATION NUMBER / EKSAMENNOMMER

A/B

QUESTION 1.1

ANSWER THIS QUESTION ON ANSWER SHEET 1.

Figure 1.1 shows a manufacturing drawing of a PULLEY TENSIONER drawn in Third-Angle Orthographic Projection.

Study the drawing and answer the following questions.

QUESTIONS	ANSWERS	MARKS			
1.1.1. What size nut is shown on the bolt B ?		1			
1.1.2. Calculate the length of the arm A.		2			
1.1.3. Determine the number of components.		2			
1.1.4. Which projection system was used ?		1			
	TOTAL	6			

VRAAG 1.1

BEANTWOORD HIERDIE VRAAG OP ANTWOORDVEL 1.

Figuur 1.1 toon 'n werkstekening van 'n SPANKATROL geteken in Derdehoekse Ortografiese Projeksie.

Bestudeer die tekening en beantwoord die volgende vrae.

VRAE	ANTWOORDE	PUNTE			
1.1.1. Wat grootte moer word op bout B getoon ?		1			
1.1.2. Bereken die lengte van arm A.		2			
1.1.3. Bepaal die hoeveelheid komponente.		2			
1.1.4.Watter projeksiesisteem is gebruik ?		1			
	TOTAAL	6			

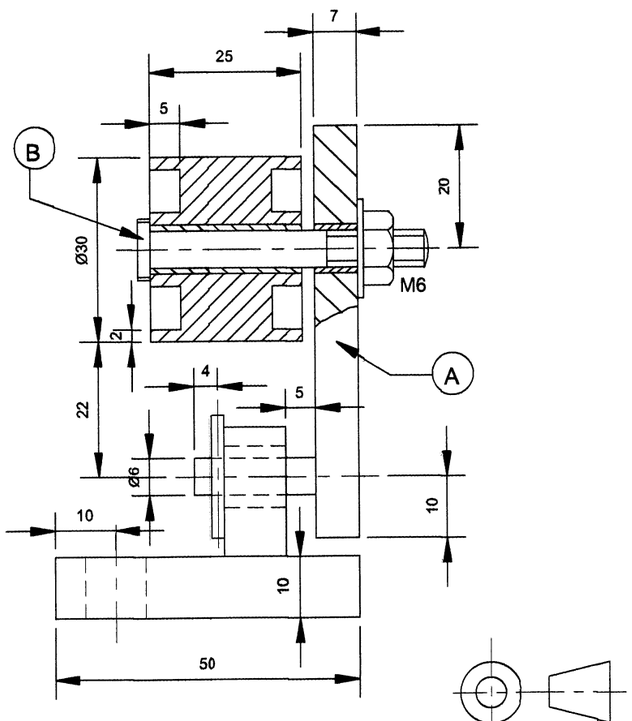


FIGURE 1.1 / FIGUUR 1.1

QUESTION 1.2

ANSWER THIS QUESTION ON ANSWER SHEET 1.

Figure 1.2 shows the front and top views of a model.

Determine, freehand, the right view of the model.	8			
TOTAL	8			

VRAAG 1.2

BEANTWOORD HIERDIE VRAAG OP ANTWOORDVEL 1.

Figuur 1.2 toon die voor- en boaansigte van 'n model.

Bepaal, vryhand, die regteraansig van die model.	8		
TOTAAL	8		

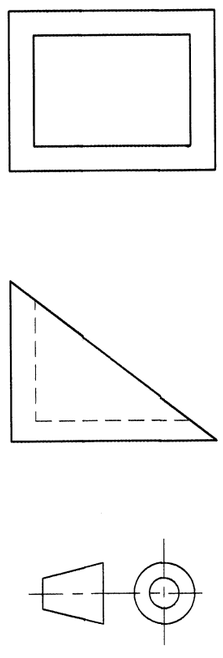


FIGURE 1.2 / FIGUUR 1.2

QUESTION 1.3

ANSWER THIS QUESTION ON ANSWER SHEET 1.

Figure 1.3 shows the front and top views of a cover.

Project the sectioned left view on cutting plane R-R.	11		
TOTAL	11		

VRAAG 1.3

BEANTWOORD HIERDIE VRAAG OP ANTWOORDVEL 1.

Figuur 1.3 toon die voor- en boaansigte van 'n deksel.

Projekteer die deursnee-linkeraansig op snyvlak R-R.	11		
TOTAAL	11		

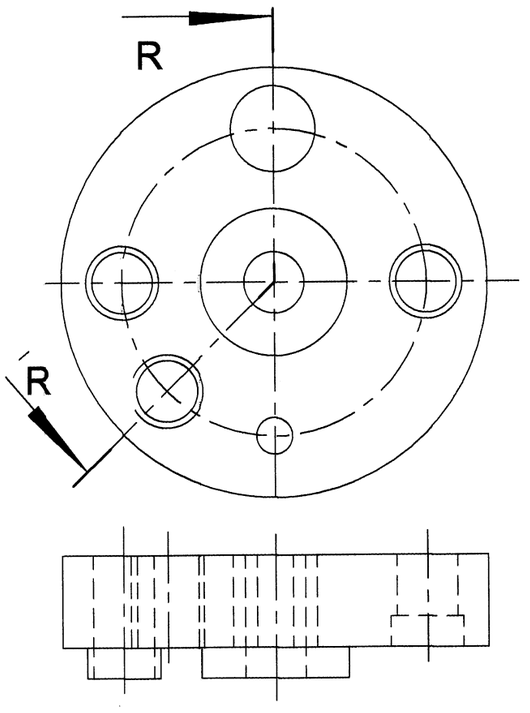


FIGURE 1.3 / FIGUUR 1.3

EXAMINATION NUMBER / EKSAMENNOMMER

A/B

QUESTION 1 / VRAAG 1

ANSWER SHEET 1

ANTWOORDVEL 1

QUESTION 1 / VRAAG 1				
QUESTION 1.1 / VRAAG 1.1	6			
QUESTION 1.2 / VRAAG 1.2	8			
QUESTION 1.3 / VRAAG 1.3	11			
TOTAL / TOTAAL	25			

QUESTION 2

ANSWER THIS QUESTION ON ANSWER SHEET 2.

Figure 2 shows in First-angle Orthographic Projection the front and top views of a SHACKLE AND PIN.

Produce to SCALE 1:1 a sectioned isometric view on cutting plane N-N. Make use of the given centre lines. Do not show hidden detail.	33			
Presentation	2			
TOTAL	35			

VRAAG 2

BEANTWOORD HIERDIE VRAAG OP ANTWOORDVEL 2.

Figuur 2 toon in Eerstehoekse Ortografiese Projeksie die voor- en boaansigte van BOEI EN PEN.

Teken volgens SKAAL 1:1 'n deursnee- isometriese aansig op snyvlak N-N. Maak gebruik van die gegewe hartlyne. Moet nie verborge detail toon nie.	33			
Aanbieding	2			
TOTAAL	35			

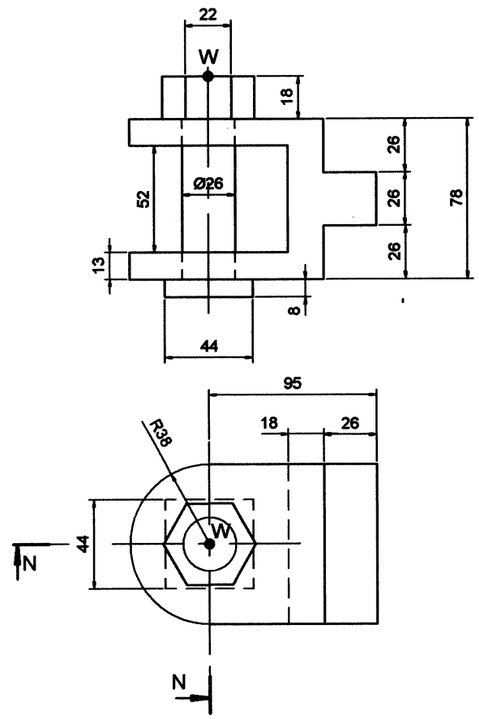
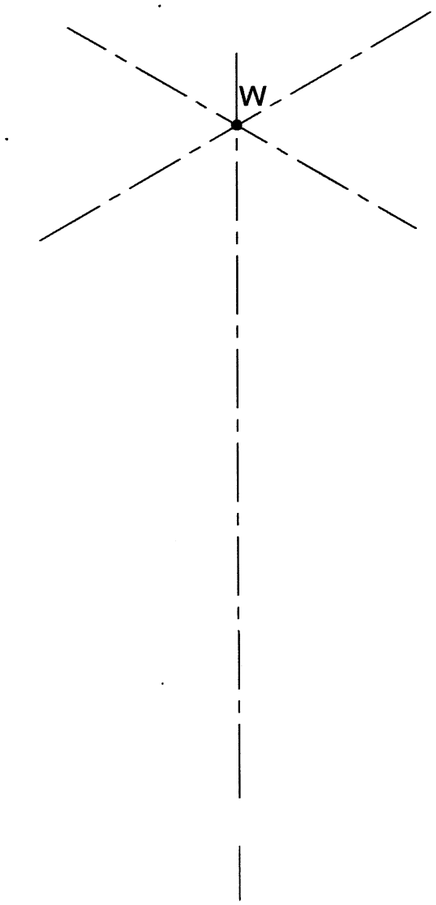


FIGURE 2 / FIGUUR 2



START AT POINT W

BEGIN BY PUNT W

EXAMINATION NUMBER / EKSAMENNOMMER

A/B

QUESTION 2 / VRAAG 2

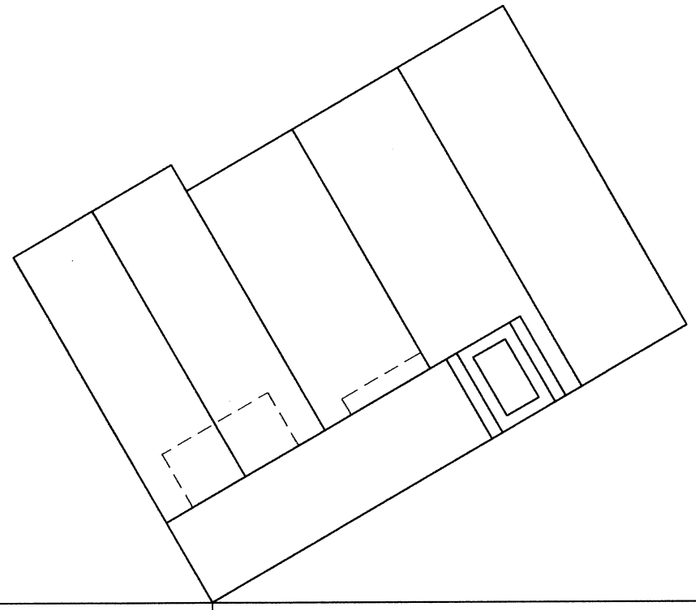
ANSWER SHEET 2
ANTWOORDVEL 2

QUESTION 3 ANSWER THIS QUESTION ON ANSWER SHEET 3. Make use of the given diagram on answer sheet 3 to produce a two-point perspective drawing of a factory. DO NOT SHOW HIDDEN DETAIL. Presentation	38 2		
TOTAL	40		

VRAAG 3 BEANTWOORD HIERDIE VRAAG OP ANTWOORDVEL 3 Deur gebruik te maak van die gegewe diagram op antwoordvel 3 teken 'n tweepuntperspektief -tekening van 'n fabriek. MOET NIE VERBORGE DETAIL TOON NIE. Aanbieding	38 2		
TOTAAL	40		

TECHNICAL DRAWING 711-1/2 U HIGHER GRADE

TEGNIESE TEKENE 711-1/2 U HOER GRAAD

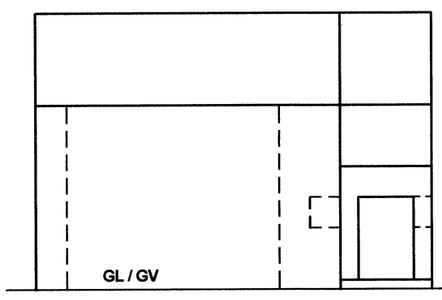


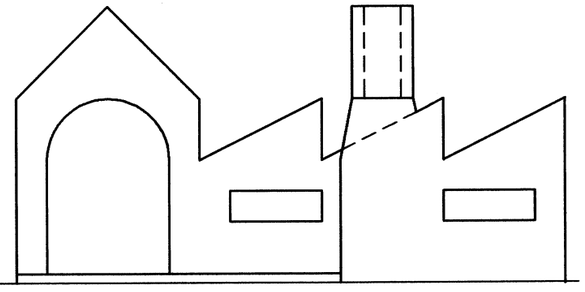
PP = PICTURE PLANE
HL = HORIZON LINE
SP = STATION POINT
GL = GROUND LINE

PV = PRENTVLAK
HL = HORISONLYN
SP = STAANPUNT
GV = GRONDVLAK

PP / PV

HL





SP

EXAMINATION NUMBER / EKSAMENNOMMER

A/B

QUESTION 3 / VRAAG 3

ANSWER SHEET 3

ANTWOORDVEL 3

QUESTION 4

ANSWER THIS QUESTION ON ANSWER SHEET 4. The Diagram Sheet for question 4 shows the components in First-Angle Orthographic Projection of a PRESSURE JOINT as well as a key to how the PRESSURE JOINT is to be assembled.

4.1 Draw to SCALE 2:1 a full sectional front view on cutting plane Q-Q of the assembled components. Do not show hidden detail.

4.2 Insert 5 dimensions on the drawing.

4.3 Show the projection system for Third Angle Orthographic Projection.

4.4 Print a Title and Scale. (100)

VRAAG 4

BEANTWOORD DIE VRAAG OP ANTWOORDVEL 4.

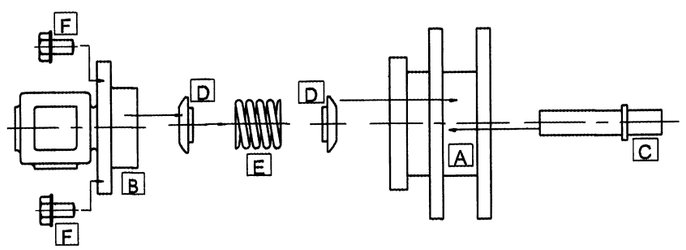
Diagramvel vir vraag 4 toon die komponente van 'n DRUKKOPPELLING in Eerstehoekse Ortografiese Projeksie asook 'n sleutel van hoe die komponente van die DRUKKOPPELLING saamgestel moet word.

4.1 Teken volgens SKAAL 2:1 'n volsnit-vooraansig op snyvlak Q-Q van die saamgestelde komponente. Moet nie verborge detail toon nie.

4.2 Voeg 5 afmetings by die tekening.

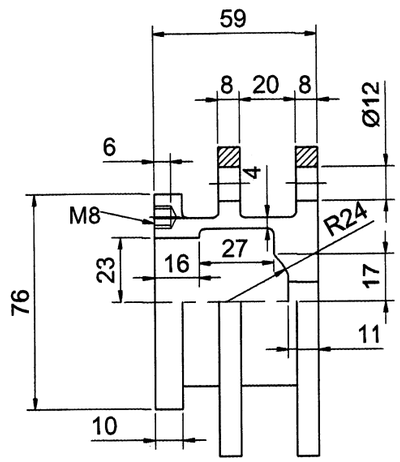
4.3 Toon die projeksiesisteem vir Derdehoekse Ortografiese Projeksie.

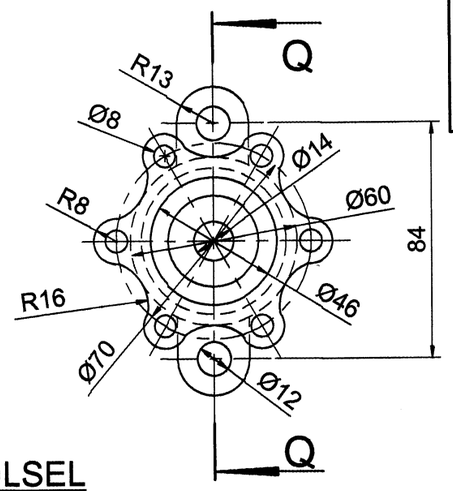
4.4 Drukskryf 'n Titel en Skaal. (100)



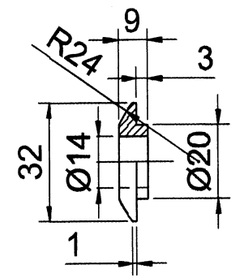
ASSEMBLY KEY

SAMESTELLING-SLEUTEL

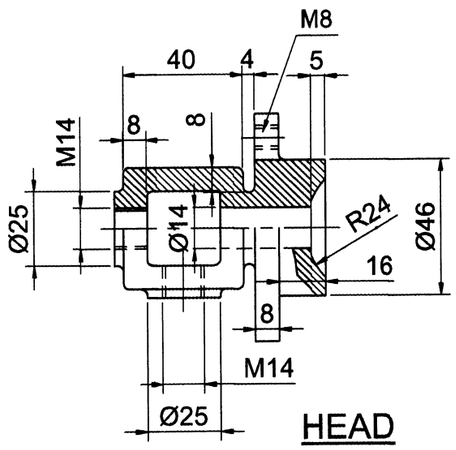


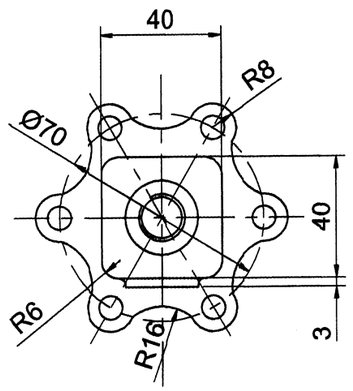


BODY [1 - OFF] **HULSEL** [1 - VAN] — A

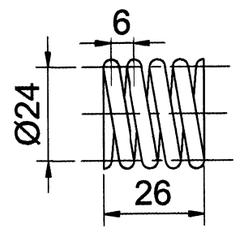


COLLAR [2 - OFF] **KRAAG** [2 - VAN] — D





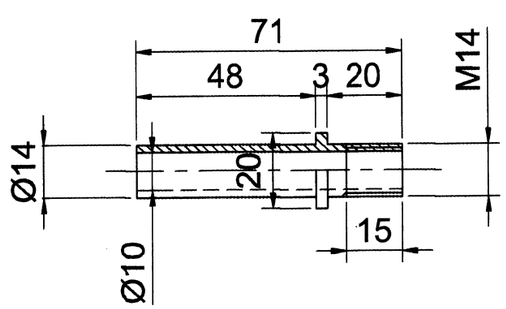
HEAD [1 - OFF] **KOP** [1 - VAN] — B



Ø 2 MM MATERIAL

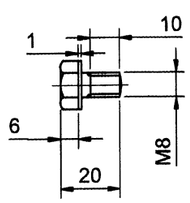
Ø 2 MM-MATERIAAL

SPRING [1 - OFF] **VEER** [1 - VAN] — E



NIPPLE [1 - OFF]

SMEERNIPPEL [1 - VAN] — C



BOLT [6 - OFF] **MOER** [6 - VAN] — F

EXAMINATION NUMBER / EKSAMENNOMMER

A/B

DIAGRAM SHEET FOR QUESTION 4
DIAGRAMVEL VIR VRAAG 4

TECHNICAL DRAWING 711-1/2 U HIGHER GRADE

TEGNIESE TEKENE 711-1/2 U HOËR GRAAD

7

MARK ALLOCATION PUNTETOEKENNING				
BODY HULSEL	24			
SECTIONING ARSERING	5			
COLLAR KRAAG	12			
SECTIONING ARSERING	2			
SPRING VEER	6			
SECTIONING ARSERING	2			
HEAD & BOLTS KOP & BOUTE	20			
SECTIONING ARSERING	7			
NIPPLE VEER	7			
SECTIONING ARSERING	2			
SUBTOTAL SUBTOTAAL	87			
DIMENSIONS AFMETINGS	3			
PROJECTION SYSTEM PROJEKSIESISTEEM	2			
TITLE & SCALE TITEL & SKAAL	1			
PRESENTATION AANBIEDING	3			
ASSEMBLY SAMESTELLING	4			
SUBTOTAL SUBTOTAAL	13			
TOTAL TOTAAL	100			

EXAMINATION NUMBER / EKSAMENNOMMER

A/B

QUESTION 4 / VRAAG 4

ANSWER SHEET 4

ANTWOORDVEL 4

END / EINDE