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NATIONAL
SENIOR CERTIFICATE

GRADE 11

ENGINEERING GRAPHICS AND DESIGN P1

NOVEMBER 2014

MARKS: 200

TIME: 3 hours

This question paper consists of 6 pages.

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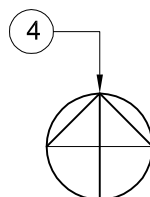
* I G R D D M 1 *

INSTRUCTIONS AND INFORMATION

1. The question paper consists of FOUR questions.
2. Answer ALL the questions.
3. All drawings must be drawn to scale 1:1, unless stated otherwise.
4. The questions must be answered on the answer sheets provided.
5. All the answer sheets must be re-stapled in numerical sequence and handed in irrespective of whether the question was answered or not.
6. Careful time management is essential in order to complete all the questions.
7. Print your name in the block provided on every answer sheet.
8. All answers must be drawn accurately and neatly.
9. Any details or dimensions not given must be assumed in good proportion.

FOR OFFICIAL USE ONLY									
								MODERATED MARK	
1									
2									
3									
4									
TOTAL									
	2	0	0						

COMPLETE THE FOLLOWING:	
NAME	
NAME	
EXAMINATION CENTRE	
EXAMINATION CENTRE	



Please turn over


Complete the table below by neatly printing the answers to the questions which all refer to the accompanying drawings and title block. **[30]**

2

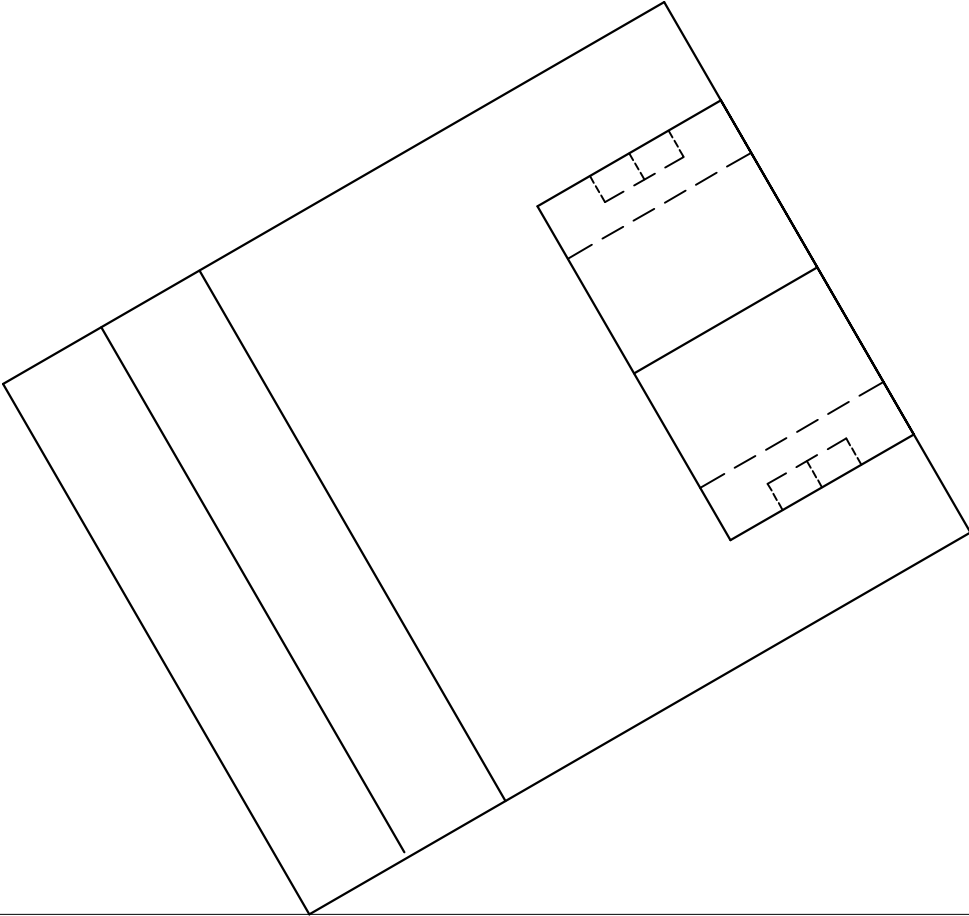


[35]

NAME	3
NAME	

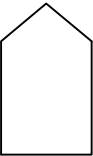


ASSESSMENT CRITERIA		
1 Vanishing points	6	
2 Constructions	4	
3 Steps 22 x $\frac{1}{2}$	11	
4 Walls 20 x $\frac{1}{2}$	10	
5 Window 10 x $\frac{1}{2}$	5	
TOTAL	36	

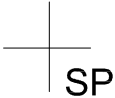


PP

HL



AUXILIARY VIEW
OF NICHE



GL

SP

NAME
NAME

4

QUESTION 3: PERSPECTIVE

Given:
A plan and elevation of an outside wedding altar , as well as the Picture Plane (PP), Horizon Line (HL), Ground Line (GL) and Station Point (SP).

Instructions:

- Determine the vanishing points and label them .
- Draw the two point perspective view of the altar.

Note:
No hidden detail must be shown.
Show all construction lines.

[36]

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DOOR AND WINDOW SCHEDULE

WOODEN
FRAME (W1)

WOODEN
FRAME (W2)

NOTE
140 X 50 BRICKS ON EDGE SILL BELOW
WINDOWS
LINTEL
PRECAST CONCRETE BEAM: 200 x 65 mm

DOOR

FRAME

HOLLOW CORE
DOOR (D)

DIMENSIONS OF SANITARY FIXTURES

TOILET (WC)

WASHBASIN (B)

BATH (B)

SHOWER (SH)

INCOMPLETE SOUTH ELEVATION

INCOMPLETE FLOOR PLAN

FIXTURES
D DOORS
W1 WINDOW OPENINGS
W2 WINDOW OPENINGS
B BATH
SH SHOWER
WC TOILET
WB WASH BASIN

INCOMPLETE FOUNDATION
AND EXTERNAL WALL DETAIL

INCOMPLETE FOUNDATION
AND INTERNAL WALL DETAIL

QUESTION 4: CIVIL DRAWING

Given: (on page 5)

- The incomplete south elevation of a **changing room** for a soccer club showing the position of the walls, windows and ground line .
- The incomplete floorplan showing the walls, position of the doors, windows and sanitary fixtures
- The incomplete foundation and wall detail of the external and internal walls
- A door and window schedule
- A table of sanitary fixtures
- The incomplete floor plan of the new **changing room**, drawn to a scale of **1:50**, on page 6

Instructions:

- Use answer sheet 4 and the information on page 5 to draw the following views to a scale of **1:50**
- **The completed floor plan**
- **The south elevation**
- **The sectional elevation** on cutting plane A-A, to the given specifications below

SPECIFICATIONS:
THE FLOOR PLAN
Add the following features to the floor plan:

- The missing wall sectioning
- The missing doors and windows with detail
- The sanitary fixtures as indicated with the abbreviations
- The cutting plane. Label the cutting plane A-A
- Insert all the given bathroom fixtures as **graphical symbols** according to the *SABS 0143* code of practice

THE SOUTH ELEVATION
Show the following features on the drawing:

- The outside walls
- The window detail
- The finished floor level

THE SECTIONAL ELEVATION - UP TO CEILING HEIGHT ONLY
Add the following features to the sectional elevation:

- The complete foundation, wall, and floor slab detail
- The window, with a single lintel above the window
- The elevation of the bath drawn as a **graphical symbol**
- ALL necessary hatching
- Label the sectional elevation:
SECTIONAL ELEVATION A-A

NOTE:

- Label **ONLY** the requested features on the respective views
- ALL substructure hatching may be done in freehand.
- ALL drawings must comply with the guidelines contained in the *SABS 0143*.

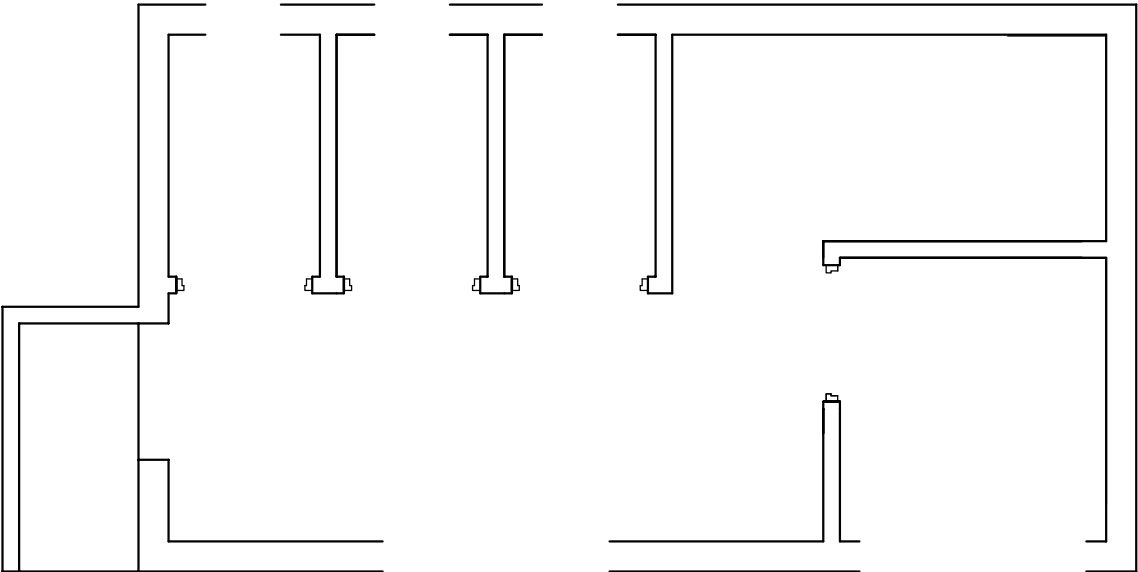
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5

ANSWER SHEET 4



FLOOR PLAN		MARKS
1 HATCHING	9	
2 DOORS AND WINDOWS	14	
3 SANITARY FIXTURES	16	
4 CUTTING PLANE	4	
SUB TOTAL	43	
SOUTH ELEVATION		MARKS
1 EXTERIOR WALLS AND CEILING	7	
2 WINDOWS	8	
3 FFL	1	
SUB TOTAL	16	
SECTIONAL ELEVATION		MARKS
1 FOUNDATION AND WALLS	15	
2 WINDOW AND LINTELS	6	
3 HATCHING	11	
4 SANITARY FIXTURES	4	
5 LABELS	2	
SUB TOTAL	38	
TOTAL	97	

NAME	<div>6</div>
NAME	