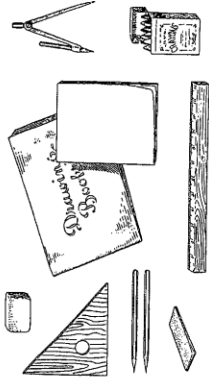


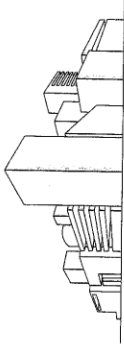
HILLCREST HIGH SCHOOL

MIDYEAR EXAMINATION

ENGINEERING, GRAPHICS & DESIGN



GRADE 12
2017
PAPER 1



MARKS: 100 **TIME: 3 HOURS**

INSTRUCTIONS TO CANDIDATES

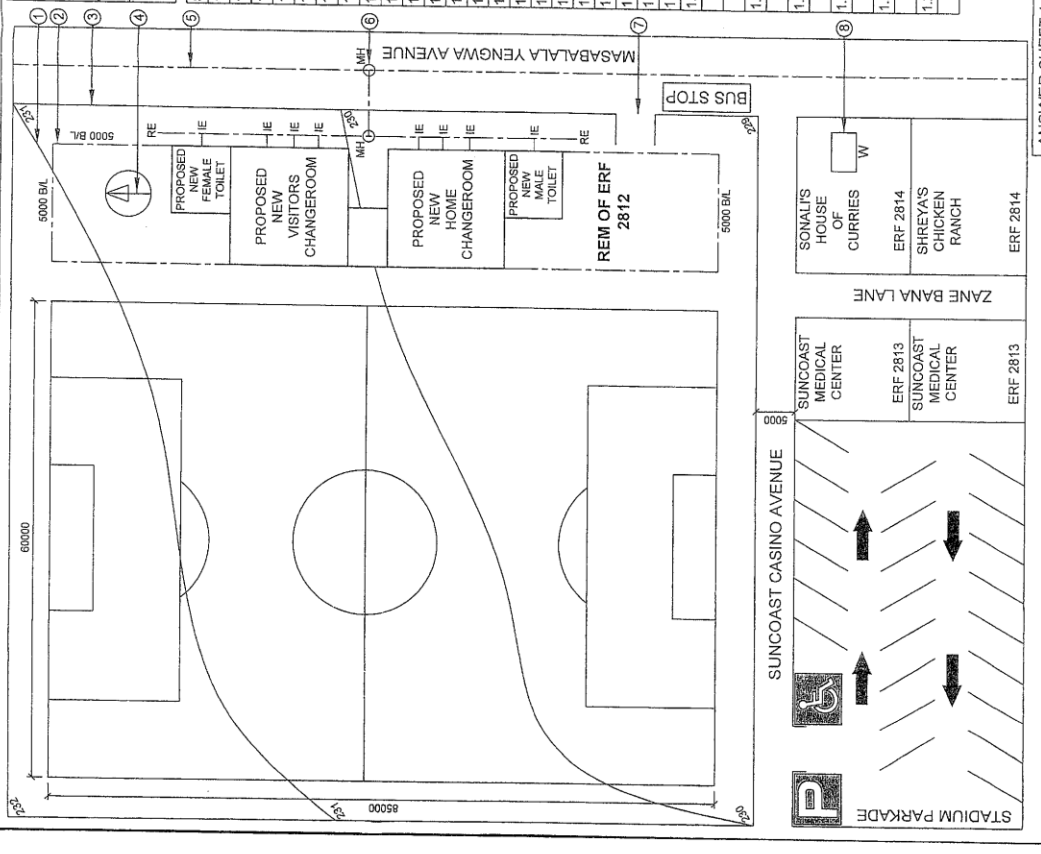
1. This question paper consists of 5 pages including the cover page and 3 questions.
2. All questions must be answered.
3. Unless specified otherwise, all questions are in First Angle Orthographic Projection.
4. Unless specified otherwise, all questions are to be completed to a scale of 1:1.
5. All answer sheets must be re-stapled in numerical order, even questions that are not attempted/blank.
6. All construction work must be shown, even if a stencil was used.
7. Print your NAME neatly on each page.
8. Use only the drawing sheets provided.
9. Your drawings should reflect neatness and accuracy.
10. All dimensions or detail not given may be assumed in good proportion.

QUESTION	SECTION	MARK	MODERATE	MAXIMUM
1	CIVIL ANALYTICAL			29
2	2 POINT PERSPECTIVE			40
3	CIVIL ASSEMBLY			106
TOTAL				175
SYMBOL				100

NAME

QUESTION 1
CIVIL
ANALYTICAL
29

Bonnetti, Skull & Jugbarn Architects
"designing for 2010"
20 Chandni Chowk Rd
CHATSWORTH
3232
TEL: (031) 3032010
FAX: (031) 3032011
CELL: (031) 3032010
www.bsjarch.co.za
pete@bsjarch.co.za
joe@bsjarch.co.za
DURBAN CITY COUNCIL
MASABALALA YENGWA AV.
REM OF ERF 2812

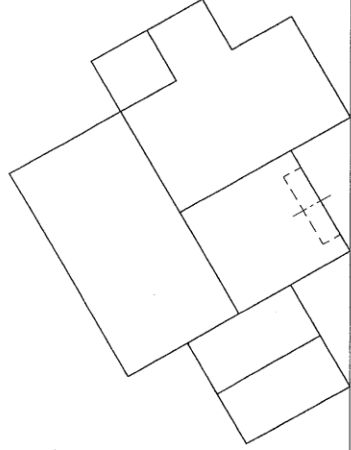


- STUDY THE ADJACENT DRAWING AND ANSWER THE QUESTIONS THAT FOLLOW:
- 1.1. What type of drawing is shown?
 - 1.2. What is the ERF number of the site?
 - 1.3. What SI unit is used for the dimensions?
 - 1.4. In which South African city would you find this property?
 - 1.5. How many Inspection Eyes are there?
 - 1.6. How many Rodding Eyes are there?
 - 1.7. What is the width of Suncoast Casino Avenue?
 - 1.8. In which South African suburb is the Architects offices?
 - 1.9. What is the feature at 1 called?
 - 1.10. What is the feature at 2 called?
 - 1.11. What is the feature at 3 called?
 - 1.12. What is the feature at 4 called?
 - 1.13. What is the feature at 5 called?
 - 1.14. What is the feature at 6 called?
 - 1.15. What is the feature at 7 called?
 - 1.16. What is the feature at 8 called?
 - 1.17. How many properties are on this plan?
 - 1.18. What elevation faces Masabalala Yengwa Avenue?
 - 1.19. What is the name of the road south of the Stadium?
 - 1.20. What is the area of the sports field playing area, in metres?
 - 1.21. How far is the northern boundary line from the northern building line?
 - 1.22. What is the highest point on this slier?
 - 1.23. How have the human rights needs of people been accommodated in this area? [Give TWO reasons]
 - 1.24. How have the needs of disabled people been accommodated in this area?
 - 1.25. It is not safe for little children to cross the road at the stadium entrance. Why is this?
 - 1.26. Why do the House of Curries and the Chicken Ranch have the same ERF number?
 - 1.27. Why is it important for bleeding players to be removed from the game immediately?
 - 1.28. Where is the nearest facility that bleeding players can be taken to?

NAME

ANSWER SHEET 1

PLEASE TURN OVER



GRADE 12 P1

TWO POINT PERSPECTIVE

The figure below shows the views of a dwelling.
 Draw a neat TWO POINT PERSPECTIVE drawing of the dwelling.
 Show all construction.
 Label the vanishing points LVP and RVP.
 Do not show any hidden detail.

ASSESSMENT CRITERIA
 You will be assessed on your ability to do the following:

- project from top view to station point
- determine the vanishing points
- project to the vanishing points
- draw the two point perspective

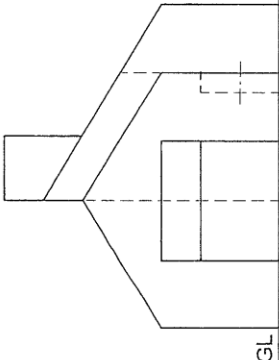
PP

HL

GL

GL

SP



GL

40

NAME

ANSWER SHEET

PLEASE TURN OVER

CIVIL ASSEMBLY

Details for a tiled new **PANTRY** is as follows:
 The following is given:

- A schematic floor plan
 - ▶ window position & door position
 - ▶ perimeter dimensions & cutting plane A-A
- A schematic elevation
 - ▶ window position and door position
 - ▶ ceiling height, ground level & floor level
- Door and Window detail
- Incomplete foundation detail
- Roof detail
 - ▶ purlin, batten & truss detail

Draw the following:

- 1) the complete floor plan
- 2) the complete sectional elevation

answer this question on ANSWER SHEET 4.

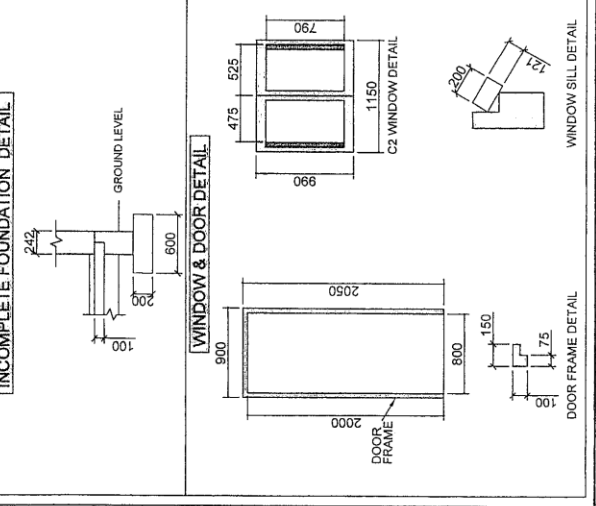
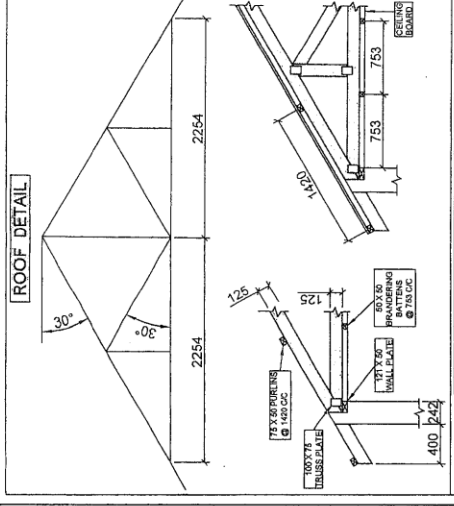
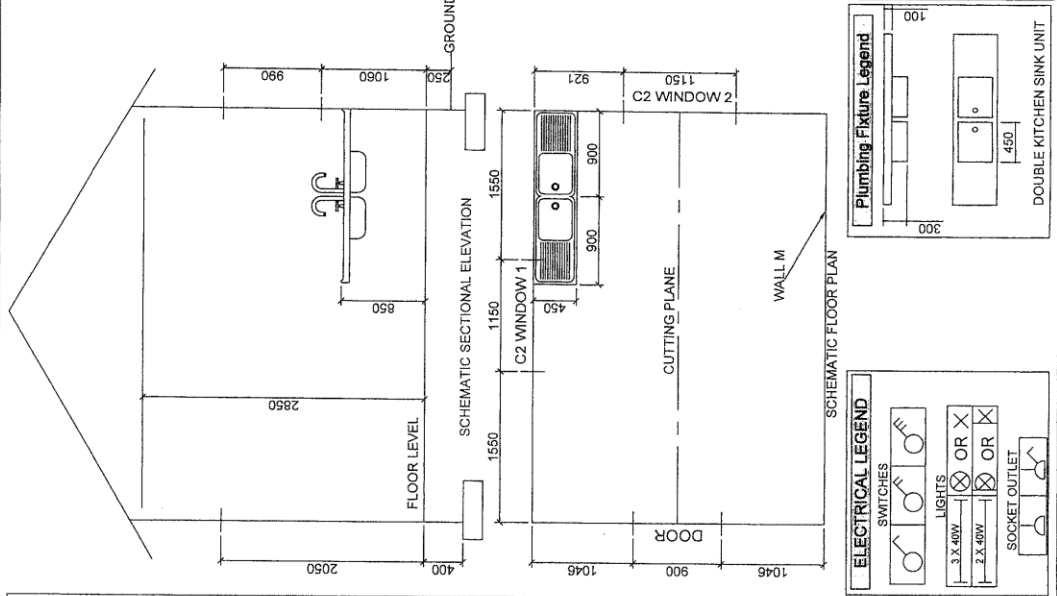
- use a scale of 1:50.
- all drawings must comply with SABS 0143

FLOOR PLAN INSTRUCTIONS

- Hatch all the walls
- Insert all window and door details
- Insert and label the cutting plane
- Insert the Plumbing Fixture using the Legend provided.
- Label the floor plan. Print the scale. Indicate the floor finish

SECTIONAL ELEVATION INSTRUCTIONS

- complete the foundation details
- Insert all floor slab details
 - ▶ use 50mm screed
 - ▶ use 150mm compacted hardcore filling
- label ground level and damp proof course
- draw in sectional window with brick window sill
- use TWO 121 X 75 concrete lintels above window
- use 200 X 121 brick window sill
- label the damp proof course
- draw the second window
- draw the door
 - ▶ use TWO 121 X 75 concrete lintels above door
 - ▶ label the damp proof course
- complete the roof details
 - ▶ draw the roof truss
 - use 125 X 38 rafters, struts and beams for the truss
 - use NINE 100 X 75 truss plates for the truss
 - ▶ use SIX 75 X 50 purlin spaced at 1420 centres
 - ▶ use TWO 121 X 50 wall plates
 - ▶ use FOURS, 50 X 50 battens spaced at 755 centres
 - ▶ use 20mm steel sheathing for the roof
 - ▶ the roof pitch is 30° and use 6mm ceiling boards
- complete all hatch detail
- label the sectional elevation
- Insert the Plumbing Fixture using the Legend provided.
- Insert electrical detail according to the legend given:
 - ▶ A single TWO, 40 watt fluorescent tube light fitting in the centre of the ceiling
 - ▶ A single wall mounted light outside the door
 - ▶ ONE switched socket outlet on the centre of wall M
 - ▶ ONE switch for all lights.



CIVIL
ASSEMBLY

ASSESSMENT CRITERIA

SECTIONAL ELEVATION

1	CEILING BATTENS	4
2	WALL PLATES	2
3	CEILING BOARD	1
4	TRUSS PLATES	9
5	ROOF TRUSS	8
6	PURLINS	6
7	ROOF	1
8	WALLS	5
9	WINDOW 1	5
10	WINDOW 2	6
11	DOOR	5
12	FOUNDATION	7
13	DPC	3
14	LABELS	2
15	HATCHING	14
16	SINK UNIT	2

FLOORPLAN

17	WINDOWS	6
18	DOOR	4
19	WALLS	4
20	CUTTING PLANE	2
21	LABELS	2
22	ELECTRICAL	6
23	SINK UNIT	2

TOTAL		106
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NAME

ANSWER SHEET 4