SA-STUDENT

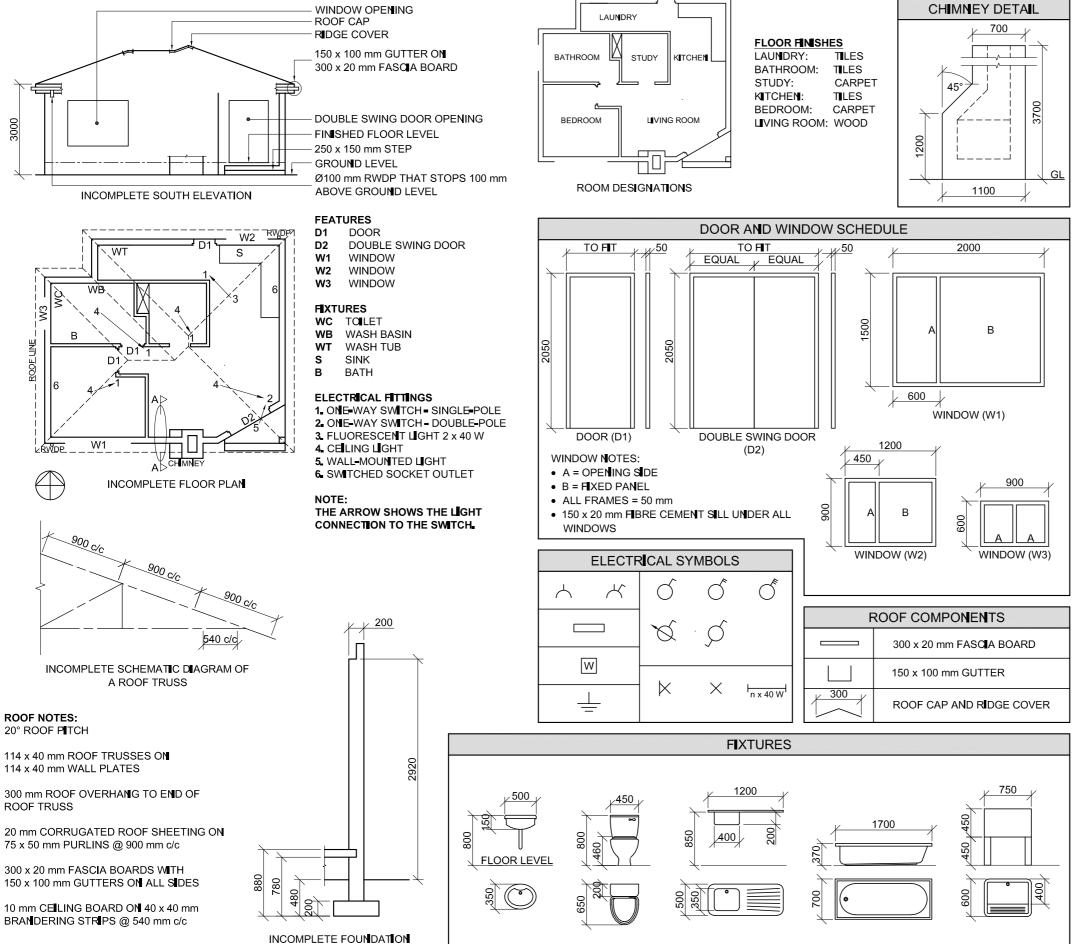
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aahh... EGD Don't You Just Love It;)





Engineering Graphics and Design/P1 NSC DBE/November 2022



WASH BASIN

(WB)

TOILET

(WC)

QUESTION 4: CIVIL DRAWING

Given:

- The incomplete south elevation of a new house, showing the walls, window and double swing door openings, step, position of the chimney, roof and labels
- The incomplete floor plan showing the walls, step, positions of the doors, windows, chimney and fixtures, as well as electrical layout
- An incomplete schematic diagram of a roof truss and roof notes
- The incomplete foundation and external wall detail
- Room designations and floor finishes
- A table with chimney detail
- A door and window schedule
- A table of electrical symbols
- A table of roof components
- A table of fixtures
- The incomplete floor plan and position of the ground level of the **new house**, drawn to scale 1:50, and the incomplete foundation and a break line for the detailed section, drawn to scale 1:20, on page 6.

Instructions: Answer this question on page 6.

4.1 Using the given incomplete floor plan and ground level, draw, to scale 1:50, the following views of the new house:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- ALL fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- ALL the roof lines
- ALL hatching detail

4.1.2 THE COMPLETE SOUTH ELEVATION Show the following features on the drawing:

- The outside walls, step, chimney, window and double swing door detail
- The roof detail, including the fascia boards, gutters and rainwater down-pipe
- The finished floor level
- 4.2 Using the given incomplete foundation and break line on page 6, draw, to scale 1:20, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The complete foundation and external wall detail
- The roof detail, including the fascia board and gutter
- The chimney and the double swing door and frame to the right (east) of cutting plane A-A
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Labe the following:

- The south elevation
- The floor finishes
- Ground level, finished floor level and damp-proof course (use the correct abbreviation and show it on ALL relevant views).

NOTE

WASH TUB

(WT)

All drawings must comply with the **guidelines** and **graphical symbols** as contained in the *SANS 10143*. [92]

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AND EXTERNAL WALL DETAIL

5

SINK

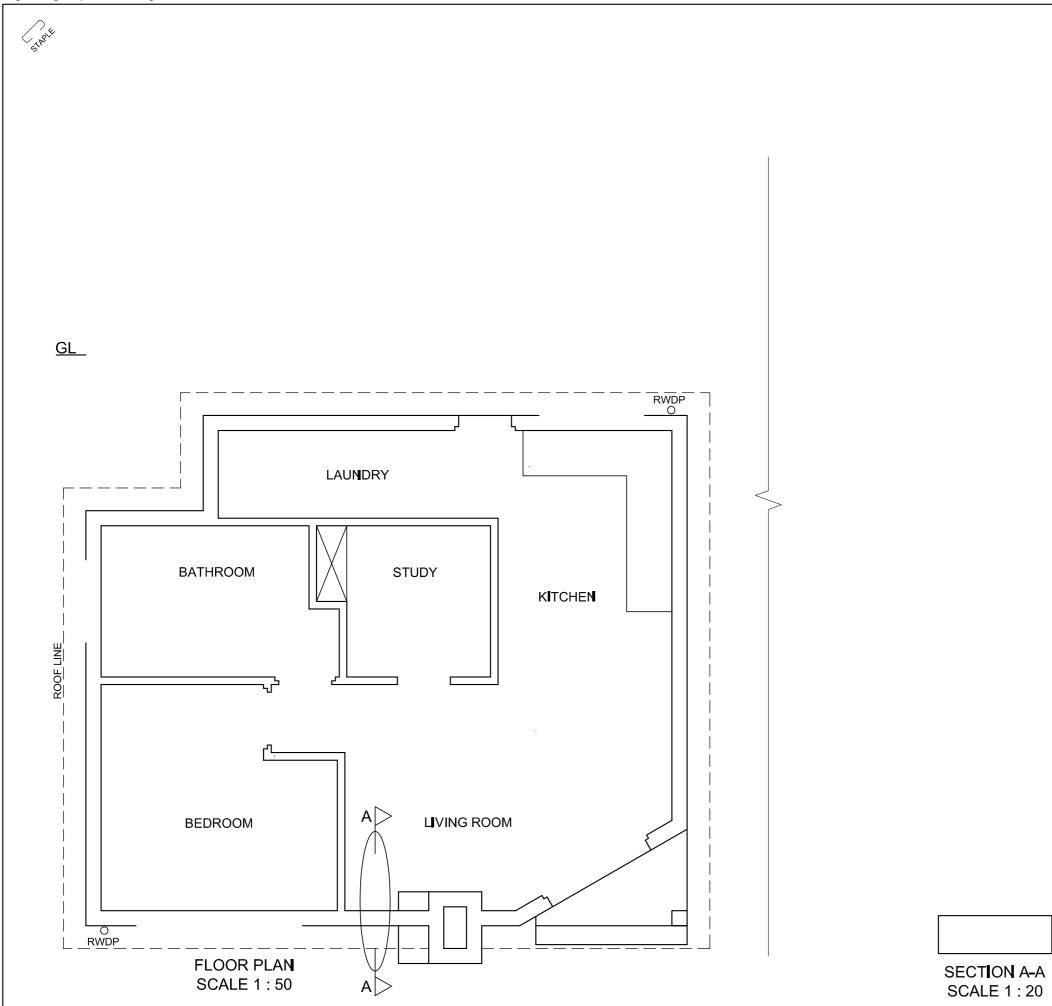
(S)

BATH

Engineering Graphics and Design/P1

NISC

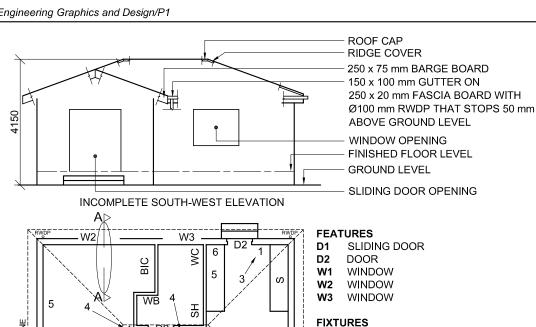
DBE/November 2022



MARK ALLOCATION FOR SECTION OF ROOF		FOR OFFICIAL USE ONLY
		INCORRECT SCALE(S)
Α		USED
В		NON-ALIGNMENT OF VIEWS
С		VILLVVO
D		VIEW(S) ROTATED
E		SECTION VIEWED INCORRECTLY
F		
G		INCORRECT LETTERING
Н		
TOTAL		TOTAL

	ASS	ESSMEN	T CRITE	RIA	
		FLOOR	PLAN		
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	DOORS + WINDOWS	11			
2	FIXTURES + ROOF LINES	15			
3	ELECTR I CAL	10			
4	HATCHING	3			
5	LABELS	3			
s	UBTOTAL	42			
	so	OUTH EL	EVATIO	N	
1	ROOF + RWDP	8 1 2			
2	WALLS + STEP + CHIMNEY + FFL	7			
3	DOOR + WINDOW	7			
4	LABELS	1			
S	UBTOTAL	$23\frac{1}{2}$			
	DE	TAILED	SECTIO	N	
1	ROOF DETAIL	11 ½			
2	SLAB + WALL + CHIMNEY	8			
3	HATCHING	3 1 2			
4	DOOR	2 1 2			
5	LABELS	1			
S	UBTOTAL	$26\frac{1}{2}$			
	TOTAL	92			
PE	NALTIES (-)				
	GRAND	TOTAL			
	EX	OTTANIMA	NUMBER		
	FX	AMINAT T O	NUMBER		6
					10

SC/NSC DBE/2022 Engineering Graphics and Design/P1



W1

INCOMPLETE FLOOR PLAN

450 c/c

SCHEMATIC DIAGRAM OF A SECTION OF

THE ROOF TRUSS AT CUTTING PLANE A-A

- WC TOILET
- WASH BASIN WB
- SHOWER SH SINK
- BIC BUILT-IN CUPBOARD

ELECTRICAL FITTINGS

- 1. ONE-WAY SWITCH SINGLE-POLE
- 2. ONE-WAY SWITCH DOUBLE-POLE 3. FLUORESCENT LIGHT 1 x 40 W
- 4. CEILING LIGHT
- 5. SWITCHED SOCKET OUTLET
- 6. DISTRIBUTION BOARD

NOTE:

2050

CONNECTION TO THE SWITCH.

TO FIT

EQUAL, EQUAL

 \circ

Ø60 DOOR KNOBS

BUILT-IN CUPBOARD

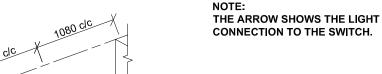
DETAIL

80

240

009

700



80 x 200 mm

LINTELS ABOVE

ALL OPENINGS

GROUND &

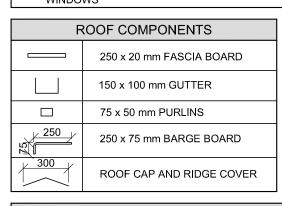
LEVEL

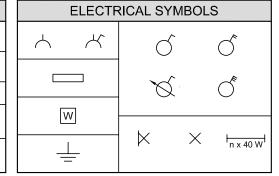
500

600

INCOMPLETE FOUNDATION

AND EXTERNAL WALL DETAIL



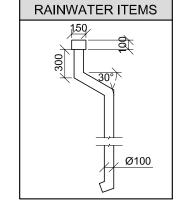


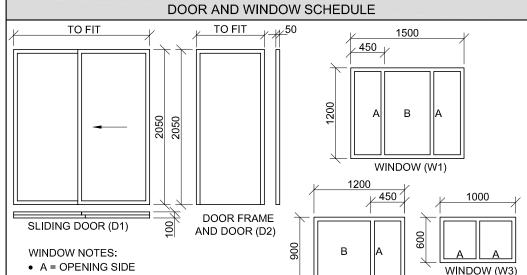
FIXTURES 1200 500 FLOOR **LEVEL** WASH BASIN **TOILET** SINK SHOWER (WB) (WC) (SH)

Given:

TILES TILES CARPET VINIYI

ROOM DESIGNATIONS





FLOOR FINISHES

1. KITCHEN:

2. BATHROOM:

3. BEDROOM.

LIVING AREA:

- B = FIXED PANEL
- ALL FRAMES = 50 mm
- 150 x 20 mm FIBRE CEMENT SILL UNDER ALL WINDOWS

WINDOW (W2)

QUESTION 4: CIVIL DRAWING

- The incomplete south-west elevation of a **new house**, showing the walls, the window opening, the sliding door opening, the roof and labels
- The incomplete floor plan showing the walls, roof line, positions of the doors, windows and fixtures, as well as the electrical layout
- A schematic diagram of a section of a roof truss at cutting plane A-A and roof notes
- The incomplete foundation and external wall detail
- The built-in cupboard detail
- Room designations and floor finishes
- A table of rainwater items
- A door and window schedule
- A table of roof components
- A table of electrical symbols
- A table of fixtures
- The incomplete floor plan and position of the ground level of the **new house**, drawn to scale 1:50 and the incomplete foundation and a break line for the detailed section, drawn to scale 1:20, on page 6

Instructions: Answer this question on page 6.

4.1 Using the given incomplete floor plan and ground level, draw to scale 1:50 the following views of the **new house**:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- ALL fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by numbers
- ALL hatching detail

4.1.2 THE COMPLETE SOUTH-WEST ELEVATION Show the following features on the drawing:

- The outside walls, steps, window and sliding door detail
- ALL the roof detail, including the fascia board, barge boards, gutters and rainwater downpipe
- The finished floor level
- 4.2 Using the given foundation and break line on page 6, draw, to scale 1: 20, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The complete foundation, external wall and window detail
- The roof detail, including the fascia board, gutter and rainwater items
- The steps, roof, wall and built-in cupboard detail to the right of cutting plane A-A
- ALL hatching detail. ONLY the substructure may be hatched in neat freehand.

Label the following:

- The south-west elevation
- The floor finishes
- Ground level, finished floor level and damp-proof course (use the correct abbreviations and show them on ALL the relevant views)

NOTE:

ALL drawings must comply with the quidelines and graphical symbols as contained in the SANS 10143. [92]

@ 450 mm c/c

ON ALL SIDES

ROOF NOTES:

20° ROOF PITCH

114 x 40 mm ROOF TRUSSES

ON 114 x 40 mm WALL PLATES

300 mm ROOF OVERHANG TO

30 mm CORRUGATED ROOF

250 x 75 mm FIBRE CEMENT

OUTSIDE EDGE OF GUTTERS

250 x 20 mm FASCIA BOARDS

WITH 150 x 100 mm GUTTERS

10 mm CEILING BOARD ON

40 x 40 mm BRANDERING STRIPS

SHEET ON 75 x 50 mm PURLINS

BARGE BOARDS ON GABLE ENDS

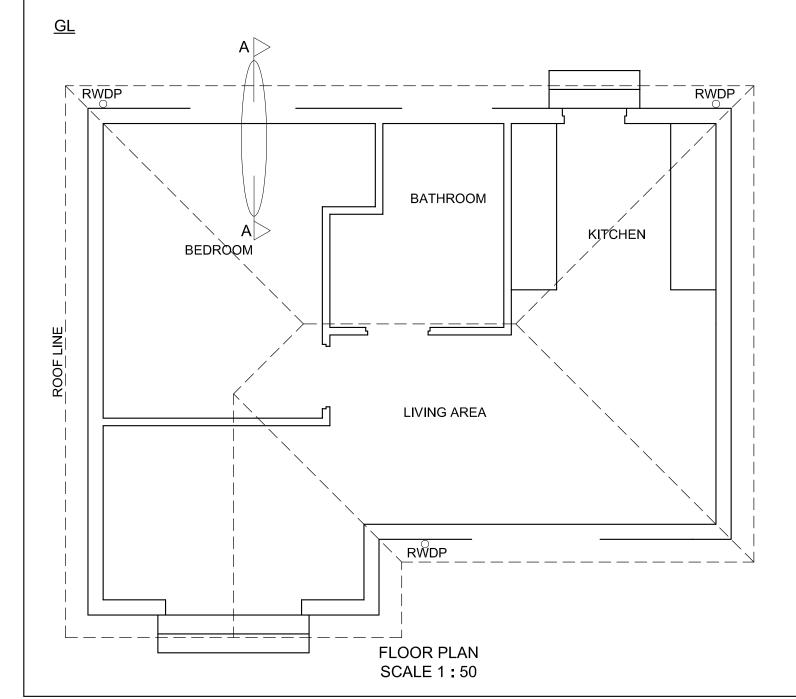
BARGE BOARDS END FLUSH WITH

END OF ROOF TRUSS

@ 1080 mm c/c

DBE/2022







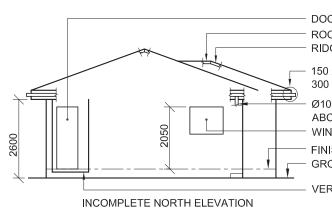
SECTION A-A SCALE 1:20

MARK ALLOCATION FOR	
SECTION OF ROO	INCORRECT SCALE(S)
A	_
В	NON-ALIGNMENT OF VIEWS
С	
D	VIEW(S) ROTATED
E	SECTION VIEWED INCORRECTLY
F	INCORRECTET
G	INCORRECT LETTERING
Н	
J	
TOTAL	TOTAL

	ASS	ESSMEN	T CRITE	RIA	
		FLOOR	PLAN		
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	DOORS + WINDOWS	11			
2	FIXTURES	9			
3	ELECTRICAL	$9\frac{1}{2}$			
4	HATCHING	3			
5	LABELS	2			
s	UBTOTAL	$34\frac{1}{2}$			
	SOUT	H-WEST	ELEVA	ΓΙΟΝ	
1	ROOF + RWDP	9 1 2			
2	WALLS + STEP + FFL	4 ½			
3	DOOR + WINDOW	8 1 2			
4	LABELS	1			
s	UBTOTAL	23 ½			
	DE	TAILED	SECTIO	N	
1	ROOF DETAIL	13			
2	SLAB + WALL + WINDOW + STEP	11 ½			
3	HATCHING	$5\frac{1}{2}$			
4	BIC	$2\frac{1}{2}$			
5	LABELS	$1\frac{1}{2}$			
s	UBTOTAL	34			
	TOTAL	92			
PEI	NALTIES (-)				
	GRAND	TOTAL			
	EX	AMINATIO	NUMBER		
	EX	AMINATIO	N NUMBER	·	6

6

Downloaded From: https://sa-student.com/



W1

D2

SH

WB.

INCOMPLETE FLOOR PLAN

DOOR OPENING ROOF CAP RIDGE COVER

150 x 100 mm GUTTER ON 300 x 20 mm FASCIA BOARD

Ø100 mm RWDP THAT STOPS 50 mm ABOVE THE 400 x 150 mm GULLEY WINDOW OPENING

FINISHED FLOOR LEVEL **GROUND LEVEL**

VERANDA FLOOR LEVEL

LIVING ROOM BEDROOM ERAND/

FLOOR FINISHES

BEDROOM: CARPET BATHROOM: TILES LIVING ROOM; WOOD KITCHEN: TILES VERANDA: TILES

DOOR AND WINDOW SCHEDULE

DOOR FRAME

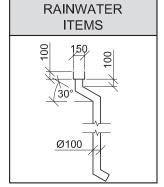
AND DOOR (D2)

ROOM AND AREA DESIGNATIONS

TO FIT

SLIDING DOOR (D1)

WINDOW NOTES:



FEATURES

D1

D2 DOOR W1 WINDOW

FIXTURES

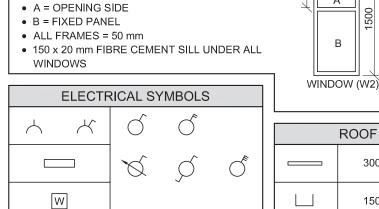
WC TOILET

SINK

ELECTRICAL FITTINGS

- 1. ONE-WAY SWITCH SINGLE-POLE
- 3. FLUORESCENT LIGHT 3 x 45 W
- 4. CEILING LIGHT

NOTE:





2200

В

600 WINDOW (W1)

525

В

1100

WINDOW (W3)

600

Α

В

FIXTURES 400 20 FLOOR LEVEL 100 1200 WASH BASIN TOILET SHOWER SINK (WB) (WC) (SH) (S)

n x 45 W

SLIDING DOOR

W2 WINDOW WINDOW

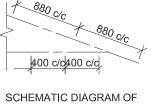
WASH BASIN WB

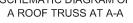
SHOWER

- 2. ONE-WAY SWITCH DOUBLE-POLE

- 5. WALL-MOUNTED LIGHT
- 6. SWITCHED SOCKET OUTLET

THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH.





ROOF NOTES: 20° ROOF PITCH

ROOF TRUSS

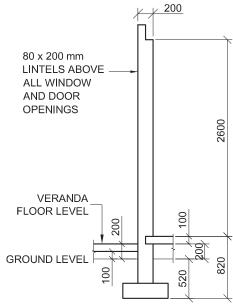
114 x 40 mm ROOF TRUSSES ON

114 x 40 mm WALL PLATES 500 mm ROOF OVERHANG TO END OF

20 mm FIBRE CEMENT ROOF SHEET ON 75 x 50 mm PURLINS @ 880 mm c/c

300 x 20 mm FASCIA BOARD WITH 150 x 100 mm GUTTER ON ALL SIDES

10 mm CEILING BOARD ON 40 x 40 mm BRANDERING STRIPS @ 400 mm c/c



INCOMPLETE FOUNDATION EXTERNAL WALL AND VERANDA DETAIL

QUESTION 4: CIVIL DRAWING

Given:

- The incomplete north elevation of a **new house**, showing the walls, the window and door openings, the veranda, the
- The incomplete floor plan showing the walls, positions of the doors, windows, fixtures and electrical layout
- A schematic diagram of a roof truss at A-A and roof notes
- The incomplete foundation, external wall and veranda detail
- Room and area designations as well as floor finishes
- A table of rainwater items
- A door and window schedule
- A table of electrical symbols
- A table of roof components
- A table of fixtures
- The incomplete floor plan and the ground line of the **new** house, drawn to scale 1:50, and the incomplete foundation and a break line for the detailed section, drawn to scale 1: 20, on page 6.

Instructions

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, to scale 1:50, the following views of the **new house**:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- ALL fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- The complete roof lines
- ALL hatching detail

4.1.2 THE COMPLETE NORTH ELEVATION

Show the following features on the drawing:

- The outside walls, veranda, window and door detail
- The roof detail, including the fascia boards, gutters, rainwater down-pipe and gulley
- The finished floor level
- 4.2 Using the given foundation and break line on page 6, draw, to scale 1: 20, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The complete foundation, external wall and window
- The roof detail, including the fascia board, gutter, rainwater down-pipe and gulley
- The wash basin to the west of cutting plane A-A
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

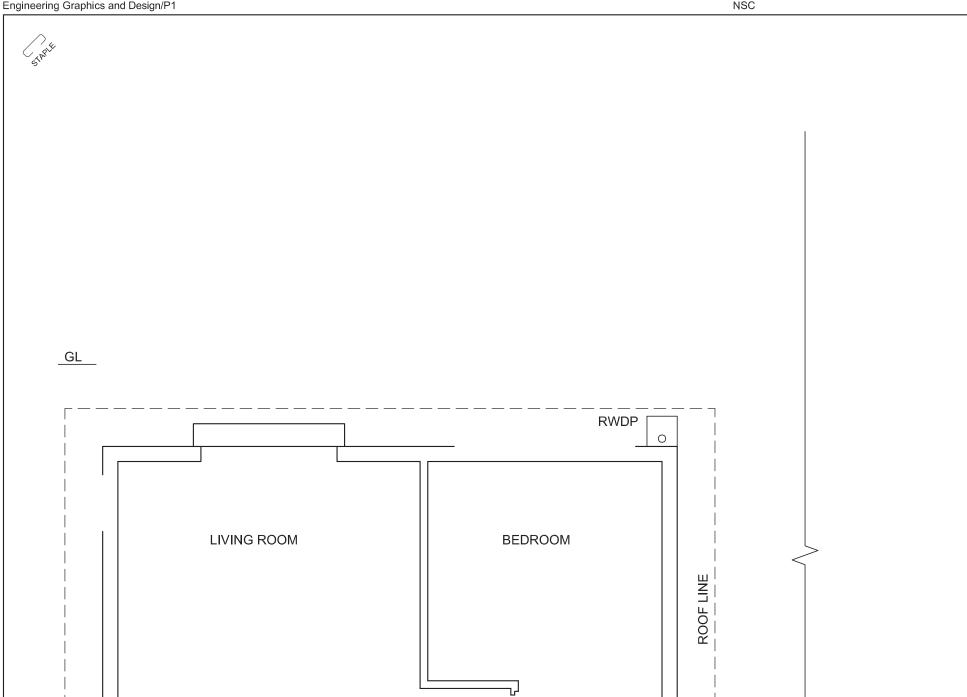
- The north elevation
- The floor finishes
- Ground level, finished floor level and damp-proof course (use the correct abbreviations and show it on ALL the relevant views)

ALL drawings must comply with the guidelines and graphical symbols as contained in the SANS 10143. [92]





Engineering Graphics and Design/P1 NSC DBE/November 2021



BATHROOM

RWDPL

ALLOCA	RK TION FOR	FOR OFFICIAL USE ONLY		
SECTION	OF ROOF	INCORRECT SCALE(S)		
А		USED		
В		NON-ALIGNMENT OF VIEWS		
С		VILVVS		
D		VIEW(S) ROTATED		
Е		SECTION VIEWED		
F		INOOKKEOTET		
G		INCORRECT LETTERING		
Н				
TOTAL		TOTAL		

	ASS	ESSME	NT CRITE	RIA		
		FLOOF	RPLAN			
		POSSIBLE	OBTAINED	SIGN	MODERAT	ED
1	DOORS + WINDOWS	13				
2	FIXTURES + ROOF LINES	11				
3	ELECTRICAL	8 1 2				
4	HATCHING	3				
5	LABELS	2 ½				
S	UBTOTAL	38				
	N	ORTH EI	EVATIO	N		
1	ROOF + RWDP + GULLEY	10 ½				
2	WALLS + STEP + FFL	4				
3	DOOR + WINDOW	6				
4	LABELS	1				
S	UBTOTAL	21 ½				
	D	ETAILED	SECTIO	N		
1	ROOF DETAIL	13 ½				
2	SLAB, WALL, WINDOW + BASIN	12				
3	HATCHING	5 ½				
4	LABELS	1 ½				
S	UBTOTAL	32 ½				
	TOTAL	92				
PE	NALTIES (-)					
	GRAND	TOTAL				
	E	KAMINATIO	N NUMBER	3		
	F	KAMINATIO	N NUMBER	3		6
		77 (170				

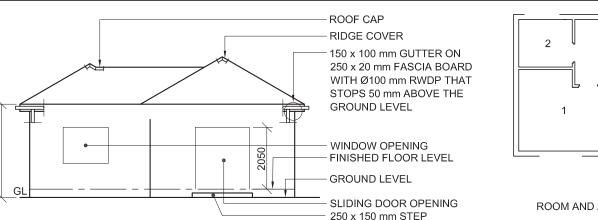
VERANDA

KITCHEN

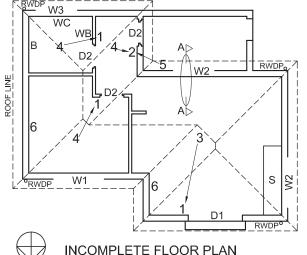
FLOOR PLAN SCALE 1:50

SECTION A-A SCALE 1:20

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INCOMPLETE NORTH ELEVATION



INCOMPLETE SCHEMATIC DIAGRAM OF

A ROOF TRUSS AT CUTTING PLANE A-A

FEATURES

SLIDING DOOR D2 DOOR

WINDOW

WINDOW W1 W2 WINDOW

FIXTURES

W3

WC TOLLET WB WASH BASIN

BATH В SINK

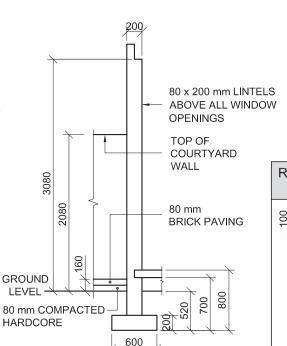
ELECTRICAL FITTINGS

- 1. ONE-WAY SWITCH -SINGLE-POLE
- 2. ONE-WAY SWITCH -DOUBLE-POLE
- 3. FLUORESCENT LIGHT 2 x 40 W
- 4. CEILING LIGHT
- 5. WALL MOUNTED LIGHT 6. SWITCHED SOCKET OUTLET

NOTE:

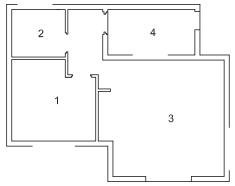
THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH.

300



INCOMPLETE FOUNDATION

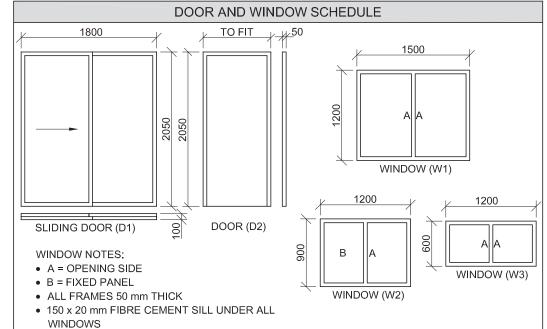
AND EXTERNAL WALL DETAIL



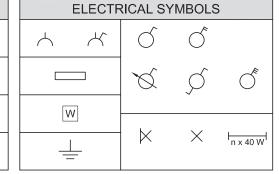
FLOOR FINISHES

1 BEDROOM: VINYL 2 BATHROOM: TILE 3 LIVING AREA: TILE 4 COURTYARD: **PAVING**

ROOM AND AREA DESIGNATIONS



	ROOF COMPONENTS				
250 x 20 mm FASCIA BOARD					
	150 x 100 mm GUTTER				
	75 x 50 mm PURLINS				
300	ROOF CAP AND RIDGE COVER				



RAINWATER FIXTURES ITEMS FLOOR LEVEL Ø100 1700 WASH BASIN **TOILET BATH** (WB) (WC) (B)

QUESTION 4: CIVIL DRAWING

Given:

- The incomplete north elevation of a **new house**, showing the walls, the window opening, the sliding door opening, the roof and labels
- The incomplete floor plan showing the walls, positions of the doors, windows, fixtures and electrical layout
- An incomplete schematic diagram of a roof truss at cutting plane A-A and roof notes
- The incomplete foundation and external wall detail
- Room and area designations and floor finishes
- A door and window schedule
- A table of roof components
- A table of electrical symbols
- A table of rainwater items
- A table of fixtures
- The incomplete floor plan and ground level of the **new house**, drawn to scale 1:50, and the incomplete foundation and break lines of a detailed section, drawn to scale 1:20, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan and ground level, draw, to scale 1:50, the following views of the new house:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- ALL fixtures as indicated by abbreviations
- ALL electrical fittings as indicated by numbers
- ALL hatching detail

4.1.2 THE COMPLETE NORTH ELEVATION

Show the following features on the drawing:

- The outside walls, step, window and sliding door detail
- The roof detail, including the fascia boards, gutters and rainwater down-pipes
- The finished floor level
- 4.2 Using the incomplete foundation, draw, to scale 1:20 and between the break lines, the **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The paving, complete foundation, external wall and window detail
- The courtyard wall to the east of cutting plane A-A
- The roof detail, including all roof and rainwater items to the east of cutting plane A-A
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

- The north elevation
- The room designations and floor finishes
- Ground level, finished floor level and damp-proof course (use the correct abbreviation and show it on ALL relevant views)

1200

SINK

(S)

ALL drawings must comply with the guidelines and graphical symbols as contained in the SANS 10143.





ROOF NOTES:

ROOF TRUSS

30° ROOF PITCH

115 x 40 mm ROOF TRUSSES ON

300 mm ROOF OVERHANG TO END OF

20 mm FIBRE CEMENT ROOF SHEET ON

75 x 50 mm PURLINS @ 800 mm c/c

250 x 20 mm FASCIA BOARDS WITH

150 x 100 mm GUTTERS ON ALL SIDES

10 mm CEILING BOARD ON 40 x 40 mm

BRANDERING STRIPS @ 400 mm c/c

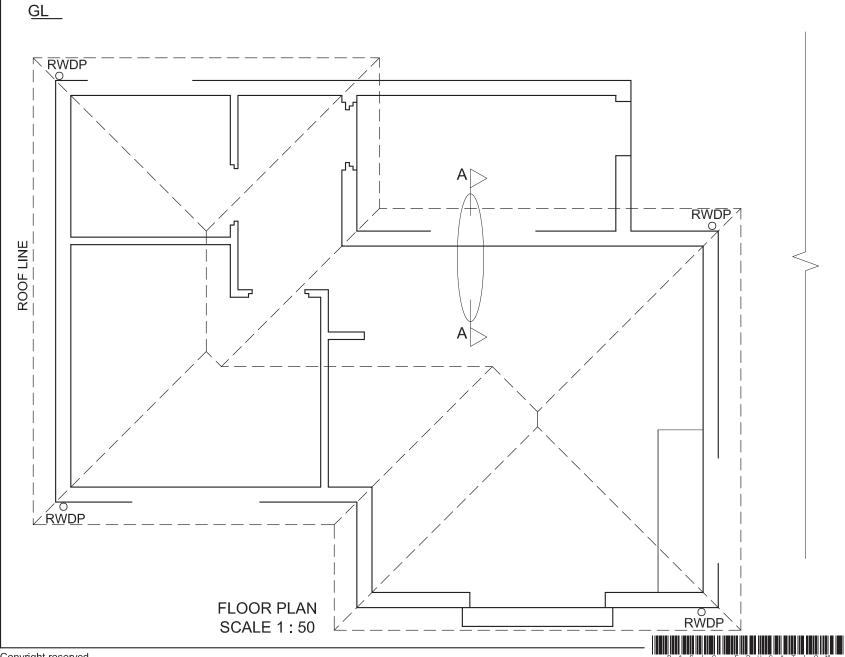
115 x 40 mm WALL PLATES

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FOR SEC	ROOF		FOR (
	OF	INCORREC	1
Α		USED	USED
В		NON-ALIGN	
С		VILVVO	VILVVO
D		VIEW(S) R	VIEW(S) F
E		SECTION V	
F		INCORREC	INCORRE
G		INCORREC	INCORRE
Н			
TOTAL			

	FOR OFFICIAL USE O	NLY
	INCORRECT SCALE(S) USED	
	NON-ALIGNMENT OF VIEWS	
	VIEW(S) ROTATED	
	SECTION VIEWED INCORRECTLY	
	INCORRECT LETTERING	
+		
	TOTAL	



ASSESSMENT CRITERIA						
	FLOOR PLAN					
		POSSIBLE	OBTAINED	SIGN	MODERATED	
1	DOORS + WINDOWS	13				
2	FIXTURES	8				
3	ELECTRICAL	8 1 2				
4	HATCHING	3				
5	LABELS	4				
S	SUBTOTAL	$36\frac{1}{2}$				
	NO	RTH ELI	EVATION	I		
1	ROOF + RWDP	11 ½				
2	WALLS + STEP + FFL	4				
3	DOOR + WINDOW	8				
4	LABELS	1				
s	SUBTOTAL	$24\frac{1}{2}$				
	DE	TAILED :	SECTION	1		
1	ROOF DETAIL	14 ½				
2	SLAB + WALL + WINDOW	11 ½				
3	HATCHING	6 ½				
4	LABELS	1 ½				
s	SUBTOTAL	34				
	TOTAL	95				
PEN	ALTIES (-)					
	GRAND	TOTAL				
	EX	CAMINATIO	N NUMBER	₹		

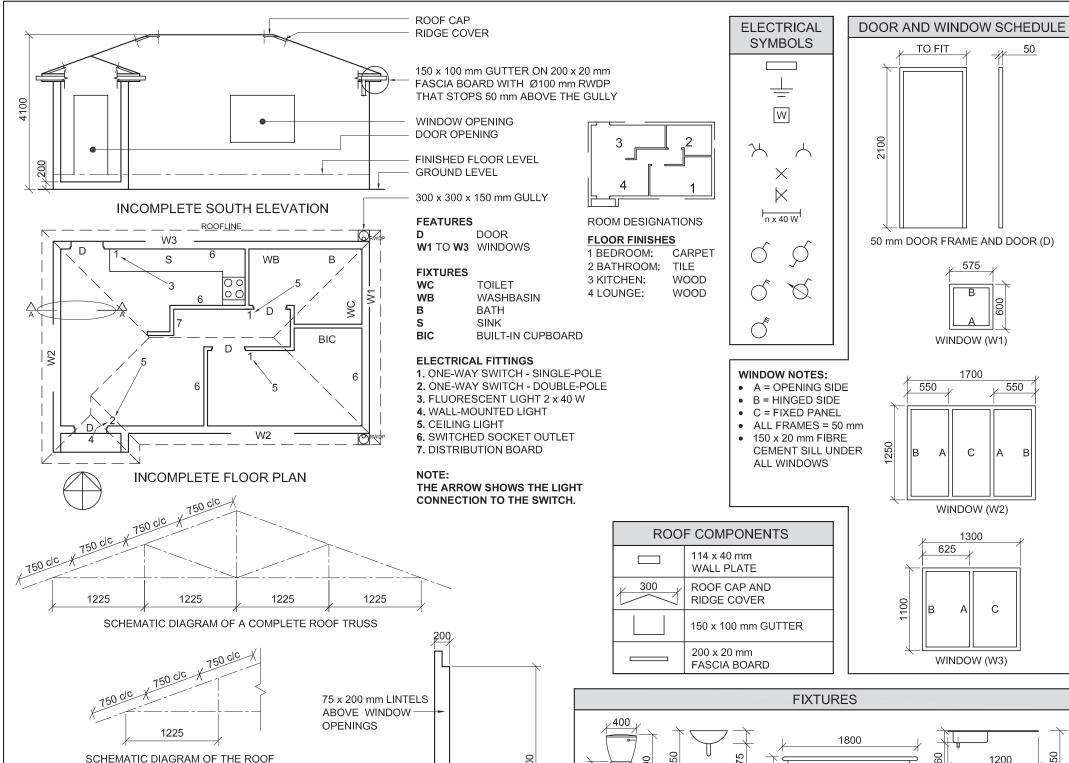
EXAMINATION NUMBER

6

SECTION A-A

SCALE 1:20

Engineering Graphics and Design/P1 SC/NSC DBE/November 2020



QUESTION 4: CIVIL DRAWING

Given:

- The incomplete south elevation of a new house, showing the walls, the door and window openings, the roof and
- The incomplete floor plan showing the walls, positions of the doors, windows, fixtures and the electrical layout
- Schematic diagrams of roof trusses and roof notes
- The incomplete foundation and external wall detail
- Room designations and floor finishes
- A table of electrical symbols
- A table of roof components
- A table of fixtures
- A door and window schedule
- The incomplete floor plan of the **new house**, drawn to scale 1:50, and corner 'B' of the foundation and the break line for the detailed section, drawn to scale 1: 20, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new house:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- The fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- ALL hatching detail

4.1.2 THE COMPLETE SOUTH ELEVATION Show the following features on the drawing:

- The outside walls, step, door and window detail
- The roof detail, including the fascia boards, gutters and rainwater down-pipe
- The finished floor level
- 4.2 Using corner 'B' of the foundation and the break line on page 6, draw, to scale 1: 20, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

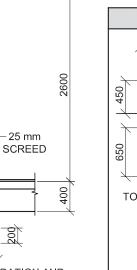
- The foundation and external wall detail
- The roof detail, including the fascia board and gutter
- The door frame and kitchen cupboard north of (above) the ellipse
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

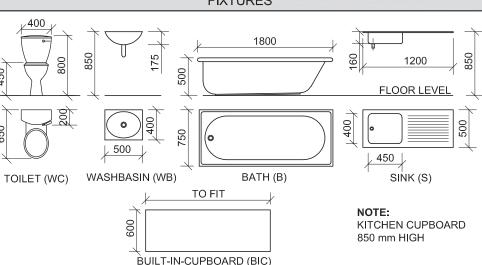
Label the following:

- The south elevation
- The room designations and floor finishes
- Ground level, finished floor level, damp-proof course and built-in cupboard (use the correct abbreviations and show it on ALL the relevant views)

NOTE:

ALL drawings must comply with the quidelines and graphical symbols as contained in the SANS 10143.





INCOMPLETE FOUNDATION AND EXTERNAL WALL DETAIL

600

GROUND

LEVEL

- 25 mm

ROOF NOTES:

20° ROOF PITCH

PURLINS @ 750 mm c/c

GUTTERS ON ALL SIDES

STRIPS @ 600 mm c/c

TRUSS AT A-A

114 x 40 mm ROOF TRUSS ON 114 x 40 mm WALL PLATES

20 mm FIBRE CEMENT ROOF SHEETING ON 75 x 50 mm

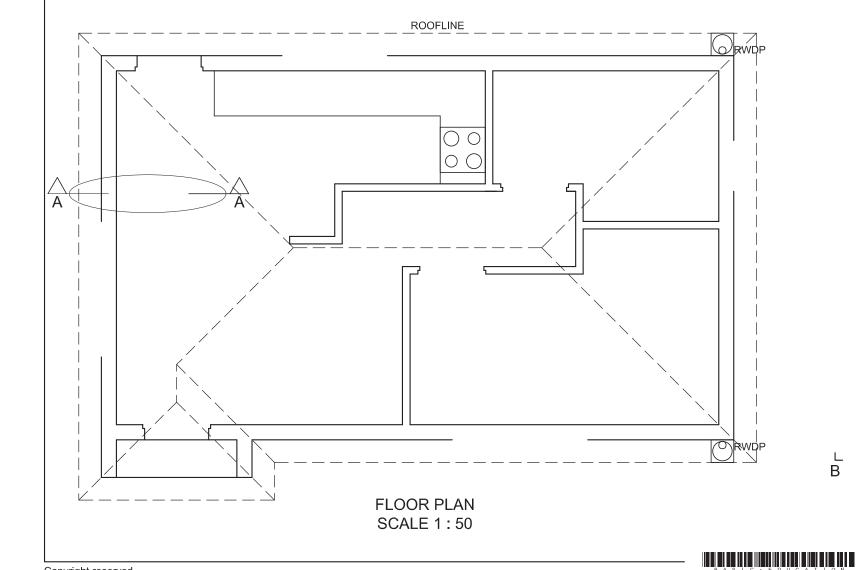
200 x 20 mm FASCIA BOARDS WITH 150 x 100 mm

10 mm CEILING BOARD ON 40 x 40 mm BRANDERING

300 mm ROOF OVERHANG TO END OF ROOF TRUSS

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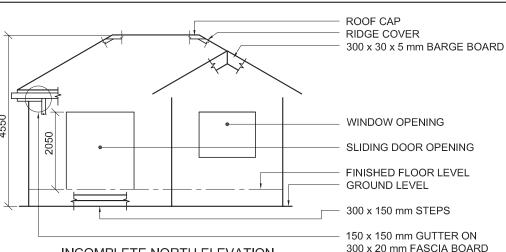
DETAILED SECTION A-A SCALE 1:20

ARK ALLOCATION FOR ROOF		FOR OFFICIAL USE ONLY		
SECTIO	DN (4.2)	INCORRECT SCALE		
Α				
В		NON-ALIGNMENT OF VIEWS		
С		VIEW(S) ROTATED		
D		,		
E		SECTION VIEWED INCORRECTLY		
F		INCORRECT		
G		LETTERING		
Н				
I				
OTAL				
		TOTAL		

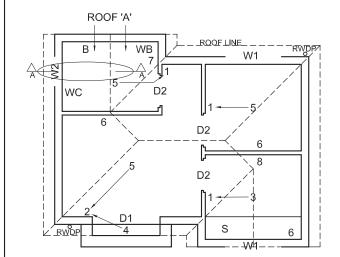
		FLOOR	DIAN		
		POSSIBLE	OBTAINED	SIGN	MODERATI
1	DOORS + WINDOWS	12			
2	ELECTRICAL	10			
3	FIXTURES	9 1			
4	HATCHING	3			
5	LABELS	41/2			
5	SUBTOTAL	39			
	S	OUTH EL	EVATION	1	
1	ROOF + RWDP	10½			
2	WALLS + FFL	5 1 2			
3	DOOR + WINDOW	7 1 /2			
4	LABELS	1 1 /2			
S	SUBTOTAL	25			
	D	ETAILED	SECTION	N	
1	ROOF DETAIL	13			
2	WALL	8			
3	DOOR + CUPBOARD	4			
4	HATCHING	4			
5	LABELS	_1			
5	SUBTOTAL	30			
	TOTAL	94			
PEN	ALTIES (-)				
	GRA	ND TOTAL			

EXAMINATION NUMBER

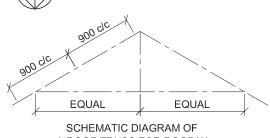
Engineering Graphics and Design/P1 NSC DBE/November 2019



INCOMPLETE NORTH ELEVATION







A ROOF TRUSS FOR ROOF 'A'

ROOF NOTES:

30° ROOF PITCH

115 x 40 mm ROOF TRUSSES ON 115 x 40 mm WALL PLATES

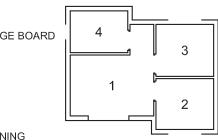
300 mm ROOF OVERHANG TO END OF ROOF TRUSS

20 mm FIBRE CEMENT ROOF SHEETING ON 75 x 50 mm PURLINS @ 900 mm c/c

300 x 20 mm FASCIA BOARD WITH 150 x 150 mm GUTTERS ON ALL SIDES

 $300 \times 30 \times 5 \text{ mm}$ BARGE BOARDS ON GABLE ENDS, 40 mm PAST THE GUTTERS

8 mm CEILING BOARD ON 40 x 40 mm BRANDERING STRIPS @ 600 mm c/c



ROOM DESIGNATIONS

FLOOR FINISHES

1. LOUNGE: CARPET 2. KITCHEN: TILES 3. BEDROOM: CARPET 4. BATHROOM: **TILES**

GROUND LEVEL FEATURES

W1 + W2 WINDOWS

WITH Ø100 mm RWDP THAT STOPS 50 mm OFF THE

DOORS

FIXTURES

D1 + D2

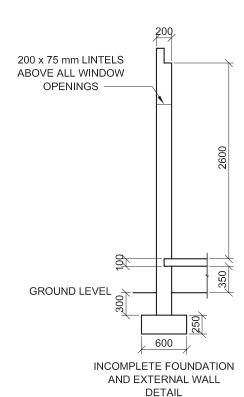
TOILET WC WB WASH BASIN В BATH SINK

ELECTRICAL FITTINGS

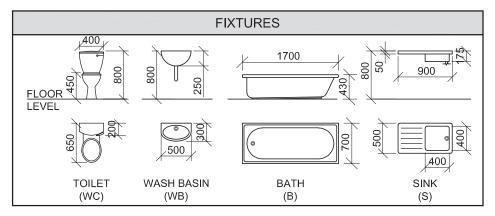
- 1. ONE-WAY SWITCH SINGLE-POLE 2. ONE-WAY SWITCH - DOUBLE-POLE
- 3. FLUORESCENT LIGHT 3 x 40 W
- 4. WALL-MOUNTED LIGHT
- 5. CEILING LIGHT
- 6. SWITCHED SOCKET OUTLET
- 7. SOCKET OUTLET
- 8. DISTRIBUTION BOARD

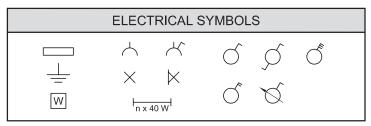
NOTE:

THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH.



WINDOW AND DOOR SCHEDULE 500_L С WINDOW (W1) SLIDING DOOR (D1) / TO FIT WINDOW (W2) WINDOW NOTES: • A = OPENING SIDE B = HINGED SIDE C = FIXED PANEL ALL FRAMES 50 mm THICK • 180 x 20 mm SILL TILE UNDER ALL WINDOWS DOOR (D2) DOOR NOTE: • ALL FRAMES 50 mm THICK





ROOF COMPONENTS						
300	ROOF CAP AND RIDGE COVER					
	150 x 150 mm GUTTER					
	300 x 20 mm FASCIA BOARD					
	300 x 30 x 5 mm BARGE BOARD					

QUESTION 4: CIVIL DRAWING

Given:

- The incomplete north elevation of a new self-contained **flatlet**, showing the walls, the sliding door and window openings, the roof and labels
- The incomplete floor plan showing the walls, steps, position of the doors, windows, fixtures and the electrical layout
- · A schematic diagram of a roof truss for roof 'A' and roof notes
- Room designations and floor finishes
- The incomplete foundation and external wall detail
- A window and door schedule
- A table of fixtures
- A table of electrical symbols
- A table of roof components
- The incomplete floor plan of the **new self-contained flatlet**, drawn to scale 1:50, and the incomplete foundation and break line for the detailed section, drawn to scale 1: 20, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new self-contained flatlet:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- The fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- ALL hatching detail

4.1.2 THE COMPLETE NORTH ELEVATION

Show the following features on the drawing:

- The outside walls, steps, window and sliding door
- The roof detail, including the barge boards, fascia boards, gutter and rainwater down-pipe
- The finished floor level
- 4.2 Using the incomplete foundation on page 6, draw, to scale 1: 20, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The complete foundation and external wall detail
- The window detail
- The roof detail, including the fascia board, gutter and barge board
- The bath
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

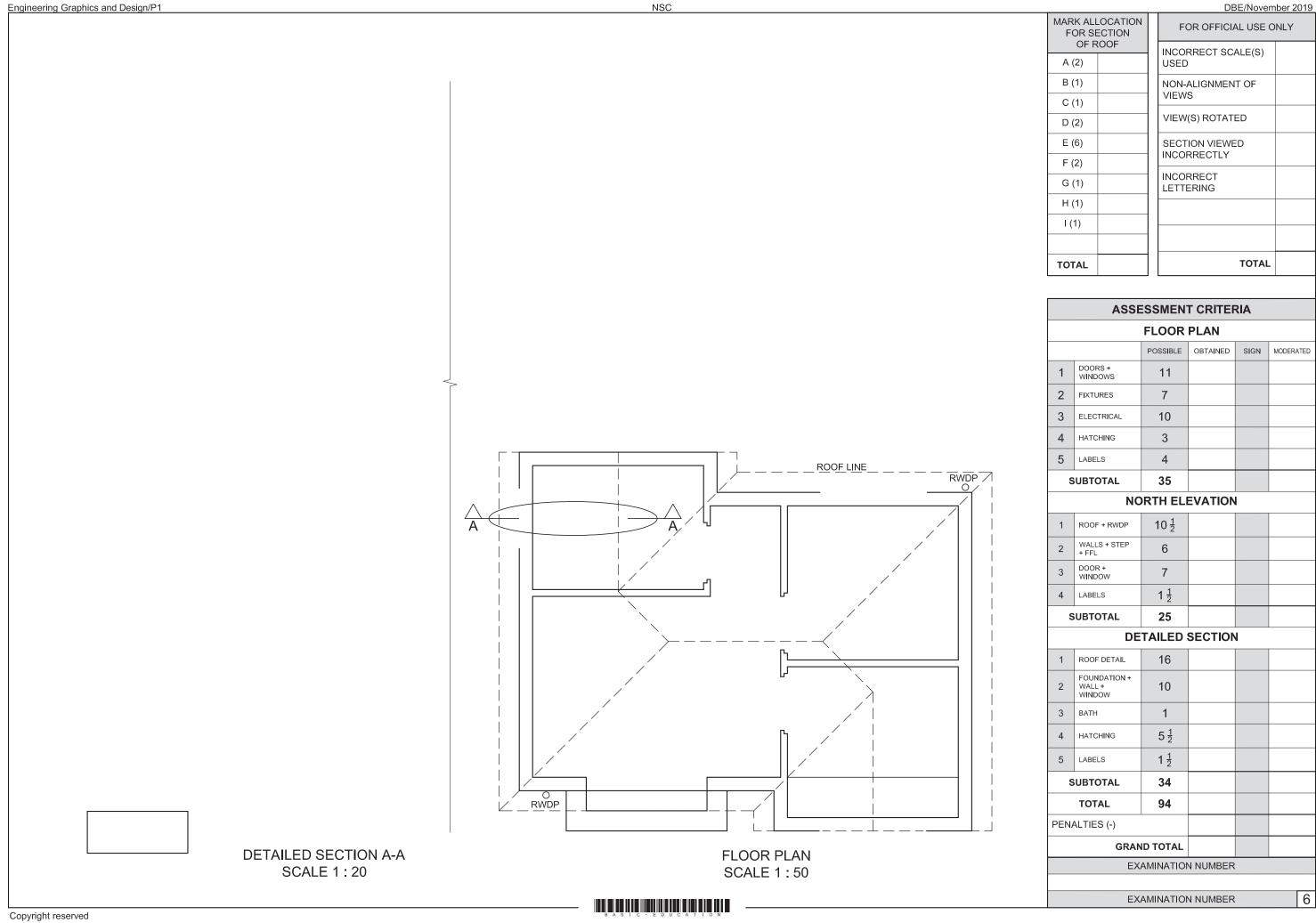
Label the following:

- The north elevation
- The room designations and floor finishes
- Ground level, finished floor level and damp-proof course (use the correct abbreviations and show it on ALL the relevant views)

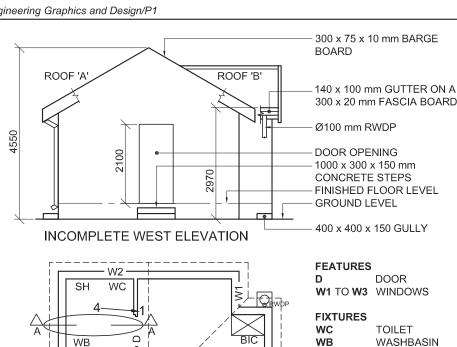
NOTE:

ALL drawings must comply with the guidelines and graphical symbols as contained in the SANS 10143. [94]





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INCOMPLETE FLOOR PLAN

114 x 38 mm ROOF TRUSS ON 114 x 38 mm WALL PLATES

30 mm CORRUGATED ROOF SHEETING ON 75 x 50 mm

300 x 75 x 10 mm BARGE BOARD ON GABLE ENDS,

300 x 20 mm FASCIA BOARD WITH 140 x 100 mm

9 mm CEILING BOARD ON 38 x 38 mm BRANDERING

1150

EQUAL

SCHEMATIC DIAGRAM OF A

ROOF TRUSS FOR ROOF 'B'

EQUAL

240 mm ROOF OVERHANG TO END OF ROOF TRUSS

SH

NOTE:

SHOWER

1. ONE-WAY SWITCH - SINGLE-POLE

2. ONE-WAY SWITCH - DOUBLE-POLE 3. FLUORESCENT LIGHT 2 x 40 W

SINK

5. SWITCHED SOCKET OUTLET

THE ARROW SHOWS THE LIGHT

CONNECTION TO THE SWITCH.

6. DISTRIBUTION BOARD

ELECTRICAL FITTINGS

4. CEILING LIGHT

3 **ROOM DESIGNATIONS**

FLOOR FINISHES

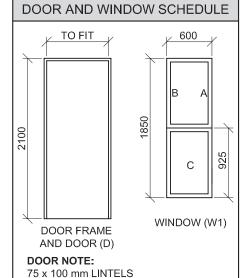
2 LIVING ROOM: CARPET

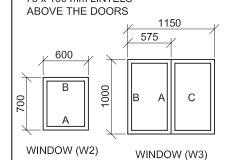
TILE

1 BATHROOM:

3 KITCHEN:

ELECTRICAL **SYMBOLS** W \times \times

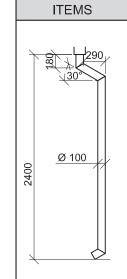




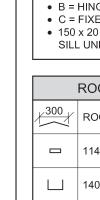
WINDOW NOTES:

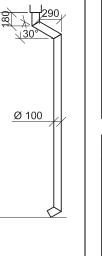
- A = OPENING SIDE
- SILL UNDER ALL WINDOWS

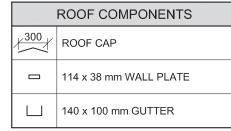
B = HINGED SIDE C = FIXED PANEL • 150 x 20 mm FIBRE CEMENT /300 **ROOF CAP** 140 x 100 mm GUTTER

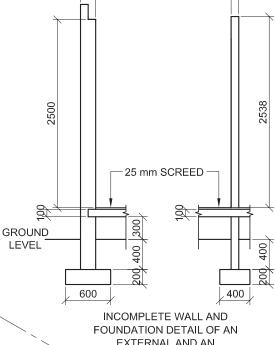


RAIN WATER

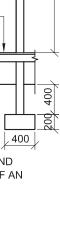


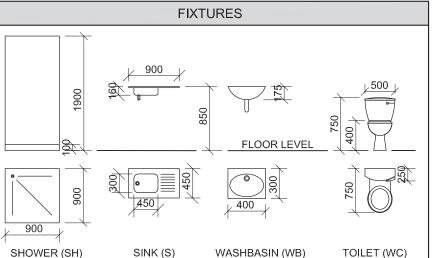






INTERNAL WALL





QUESTION 4: CIVIL DRAWING

Given:

- The incomplete west elevation of a **new house** showing the walls, the door and window openings, the roof and notes
- The incomplete floor plan showing the walls, positions of the doors, windows, fixtures and the electrical layout
- Roof notes and a schematic diagram of roof truss 'A' and roof truss 'B'
- Room designations and floor finishes
- The incomplete wall and foundation detail of an external and an internal wall
- A table of electrical symbols
- A table of rain water items
- A door and window schedule
- A table of roof components
- A table of fixtures
- The incomplete floor plan of the **new house**, drawn to scale 1:50 and the incomplete foundation of a detailed section. drawn to scale 1:20, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new house:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- The fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- ALL hatching detail

4.1.2 THE COMPLETE WEST ELEVATION

Show the following features on the drawing:

- The outside walls, gullies, steps and door detail
- The roof detail, including the barge boards, fascia board, gutter and rainwater down-pipes
- The finished floor level
- 4.2 Using the incomplete foundation on page 6, draw, to scale 1:20, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The wall and foundation detail of both walls
- The door detail
- The roof detail, including the fascia board, barge board
- The shower, toilet and the window above the ellipse
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

- The west elevation
- The room designations and floor finishes
- Ground level, finished floor level and damp-proof course (use the correct abbreviations and show it on ALL the relevant views)

NOTE:

ALL drawings must comply with the guidelines and graphical symbols as contained in the SANS 10143. [95]



1150

SCHEMATIC DIAGRAM OF A

ROOF TRUSS FOR ROOF 'A'

ROOF NOTES:

30° ROOF PITCH

PURLINS @ 1000 mm c/c

20 mm PAST THE GUTTER

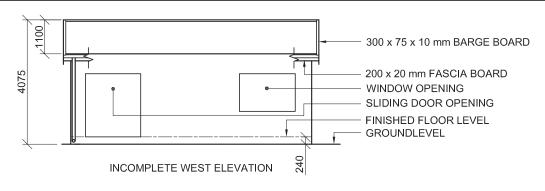
GUTTERS ON ALL SIDES

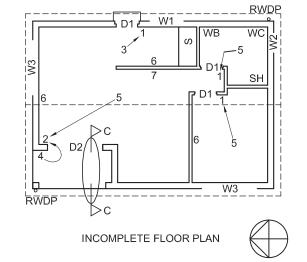
STRIPS @ 400 mm c/c

Downloaded From: https://sa-student.com/

SC/NSC Engineering Graphics and Design/P1 DBE/2019 1. MARK FOR OFFICIAL USE ONLY ALLOCATION FOR ROOF SECTION INCORRECT SCALE(S) A (1) USED B (1) NON-ALIGNMENT OF **VIEWS** C (2) VIEW(S) ROTATED D (5) E (2) SECTION VIEWED INCORRECTLY F (1) INCORRECT G (1) LETTERING H (1) I (1) TOTAL TOTAL ASSESSMENT CRITERIA **FLOOR PLAN** POSSIBLE OBTAINED SIGN MODERATED DOORS + WINDOWS 10 2 ELECTRICAL 6 3 FIXTURES 8 4 HATCHING 3 5 LABELS 3 SUBTOTAL 30 **WEST ELEVATION** ROOF + RWDP 10 2 $6\frac{1}{2}$ WALLS + FFL 3 DOOR 2 BIC $1\frac{1}{2}$ 4 LABELS 20 SUBTOTAL **DETAILED SECTION** ROOF DETAIL 15 FOUNDATION + WALL + DOOR 2 $14\frac{1}{2}$ WC + SHOWER + WINDOW 3 7 4 $7\frac{1}{2}$ HATCHING 5 LABELS 1 SUBTOTAL 45 TOTAL 95 RWDP PENALTIES (-) **GRAND TOTAL** EXAMINATION NUMBER **FLOOR PLAN DETAILED SECTION A-A** SCALE 1:20 SCALE 1:50 6 **EXAMINATION NUMBER**

Engineering Graphics and Design/P1 NSC DBE/November 2018





FEATURES

DOOR D1 SLIDING DOOR W1 TO W3 WINDOWS

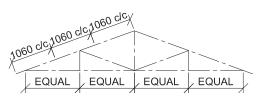
FIXTURES

WC TOILET WB WASHBASIN SHOWER SH SINK

ELECTRICAL FITTINGS

- 1. ONE-WAY SWITCH SINGLE-POLE 2. ONE-WAY SWITCH - DOUBLE-POLE
- 3. FLUORESCENT LIGHT 2 x 40 W
- 4. WALL-MOUNTED LIGHT
- 5 CEILING LIGHT
- 6. SWITCHED SOCKET OUTLET
- 7. DISTRIBUTION BOARD

THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH.



SCHEMATIC DIAGRAM OF A ROOF TRUSS

ROOF NOTES:

20° ROOF PITCH

114 x 38 mm ROOF TRUSSES ON 114 x 38 mm WALL PLATES

240 mm ROOF OVERHANG TO END OF ROOF **TRUSSES**

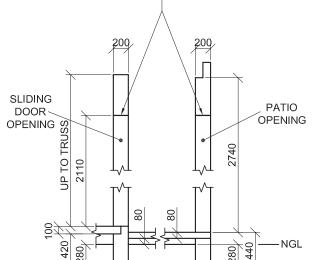
30 mm CORRUGATED ROOF SHEETING ON 75 x 50 mm PURLINS @ 1060 mm c/c

300 x 75 x 10 mm BARGE BOARD ON GABLE ENDS, 20 mm PAST THE GUTTER

200 x 20 mm FASCIA BOARD ON BOTH SIDES

150 x 100 mm GUTTER ON BOTH SIDES WITH Ø100 RAINWATER DOWN-PIPES

10 mm CEILING BOARD ON 38 x 38 mm BRANDERING STRIPS @ 460 mm c/c



200 x 80 mm LINTELS ABOVE

ALL DOORS. WINDOWS AND OPENINGS, ALL AT THE

SAME HEIGHT

INCOMPLETE DETAIL OF FOUNDATIONS AND WALLS FOR THE VERANDA

600

ROOM DESIGNATIONS

FLOOR FINISHES

1. BEDROOM. CARPET 2. VERANDA: **GRANO** 3. LIVING AREA: WOOD

4. KITCHEN: TILE 5. BATHROOM: TILE

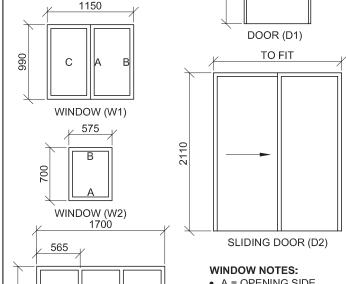
ELECTRICAL

SYMBOLS

W

X

n x 40 W



С WINDOW (W3)

С

• A = OPENING SIDE

DOOR AND WINDOW SCHEDULE

TO FIT

- B = HINGED SIDE • C = FIXED PANEL
- 150 x 20 mm FIBRE **CEMENT SILL UNDER** ALL WINDOWS
- ALL FRAMES 50 mm THICK

ROOF COMPONENTS 114 x 38 mm 300 x 75 x 10 mm FIBRE WALL PLATE CEMENT BARGE BOARD 200 x 20 mm FASCIA 300 **ROOF CAP BOARD**

1200 450 FLOOR LEVEL

SHOWER

(SH)

WASHBASIN

(WB)

FIXTURES

TOILET

(WC)

QUESTION 4: CIVIL DRAWING

Given:

- The incomplete west elevation of a **new house** showing the walls, the sliding door and window openings, the roof and
- The incomplete floor plan showing the walls, positions of the doors, windows, fixtures and the electrical layout
- A schematic diagram of a roof truss and roof notes
- The incomplete detail of the foundations and walls for the veranda
- Room designations and floor finishes
- A table of electrical symbols
- A door and window schedule
- A table of roof components
- A table of fixtures
- The incomplete floor plan of the **new house**, drawn to scale 1:50, and the incomplete foundation and break line of the detailed section, drawn to scale 1: 20, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new house:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- The fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- ALL hatching detail

4.1.2 THE COMPLETE WEST ELEVATION

Show the following features on the drawing:

- The outside walls, sliding door and window detail
- The veranda detail
- The roof detail, including the roof cap, barge boards, fascia board, gutter and rainwater down-pipe
- The finished floor level
- 4.2 Using the incomplete foundation and break line on page 6, draw, to scale 1:20, a **DETAILED SECTION** on cutting plane C-C of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The complete detail of the foundations and walls for the veranda
- The door detail
- The roof detail, including the fascia board, gutter and barge board
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

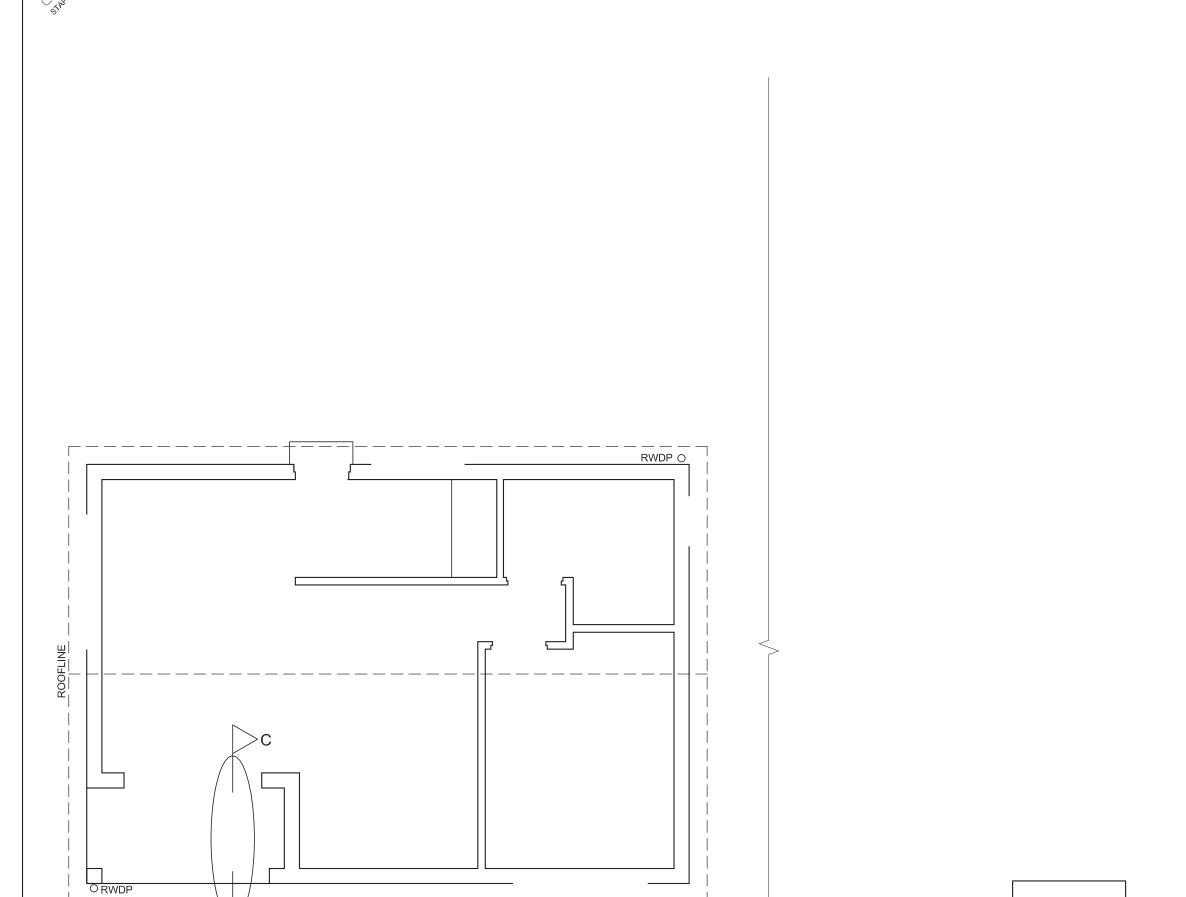
- The west elevation
- The room designations and floor finishes
- Ground level, finished floor level and damp-proof course (use the correct abbreviations and show them on ALL the relevant views)

SINK

(S)

ALL drawings must comply with the guidelines and graphical symbols as contained in the SANS 10143.

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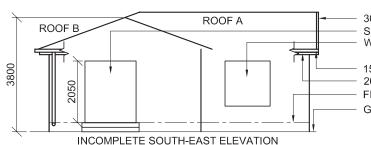


MARK ALLOCATION FOR ROOF SECTION (4.2)		FOR OFFICIAL USE ONLY		
		INCORRECT SCALE		
A (1)				
B (1)		NON-ALIGNMENT OF VIEWS		
C (2)		VIEW(S) ROTATED		
D (3)		OF CTION MEMER		
E (2)		SECTION VIEWED INCORRECTLY		
F (1)		INCORRECT		
G (1)		LETTERING		
H (2)				
I (1)				
J (1)				
TOTAL		TOTAL		

	ASSESS	MENT C	RITER	A		
	FL	OOR PL	.AN			
		POSSIBLE	OBTAINED	SIGN	MODERATED	
1	DOORS + WINDOWS	$13\frac{1}{2}$				
2	FIXTURES	7				
3	ELECTRICAL	9 <u>1</u>				
4	HATCHING	4				
5	LABELS	5				
	SUBTOTAL	39				
	WES ⁻	Γ ELEV	ATION			
1	ROOF + RWDP	5 ½				
2	WALLS + FFL + STEP	4				
3	DOOR + WINDOW	7 ½				
4	LABELS	1 ½				
	SUBTOTAL	18 ½				
	DETAI	LED SE	CTION			
1	ROOF	12				
2	FOUNDATION + WALL + SLAB + DOOR + LINTEL	13 ½				
3	HATCHING	9				
4	LABELS	1				
	SUBTOTAL					
	TOTAL 93					
TC	TOTAL PENALTIES (-)					
GRAND TOTAL						
EXAMINATION NUMBER						
EVAMINATION WINDER						
EXAMINATION NUMBER 6						

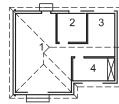
FLOOR PLAN SCALE 1:50

DETAILED SECTION C-C SCALE 1 : 20 Engineering Graphics and Design/P1 SCE DBE/2018



300 x 75 mm BARGE BOARD SLIDING DOOR OPENING WINDOW OPENING

150 x 100 mm GUTTER 200 x 20 mm FASCIA BOARD FINISHED FLOOR LEVEL GROUND LEVEL



ROOM DESIGNATIONS

FEATURES

SLIDING DOOR D2 DOOR W1 AND W2 WINDOWS

1 LIVING AREA 2 BATHROOM

CARPET TILE TILE CARPET

FLOOR FINISHES

4 BEDROOM

3 HOBBY ROOM

FIXTURES

WC TOILET WB WASH BASIN RIDET BT

SH SHOWER

ELECTRICAL FITTINGS

- 1. ONE-WAY SWITCH SINGLE POLE
- 2. TWO-WAY SWITCH SINGLE POLE 3. FLUORESCENT LIGHT 2 x 40 W
- 4. CEILING LIGHT
- 5. WALL-MOUNTED LIGHT
- 6. SWITCHED SOCKET OUTLET

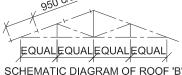
NOTE:

THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH.

EQUAL EQUAL EQUAL SCHEMATIC DIAGRAM OF ROOF 'A'

INCOMPLETE FLOOR PLAN

950 clc



ROOF NOTES: 20° ROOF PITCH

ROOFLINE

114 x 38 mm ROOF TRUSSES ON

114 x 38 mm WALL PLATES

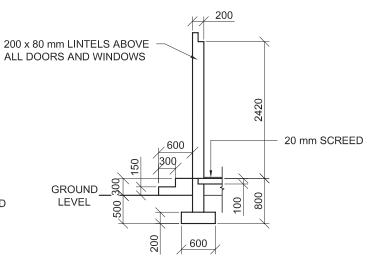
300 mm ROOF OVERHANG TO END OF **ROOF TRUSSES**

10 mm FIBRE CEMENT ROOF SHEETING ON 75 x 50 mm PURLINS SPACED ACCORDING TO SCHEMATIC DIAGRAMS

200 x 20 mm FASCIA BOARD ON ALL SIDES AND 300 x 75 mm BARGE BOARDS ON THE GABLED END, 20 mm PAST THE GUTTER

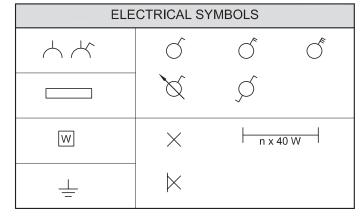
150 x 100 mm GUTTERS WITH Ø75 RWDP ON ALL SIDES

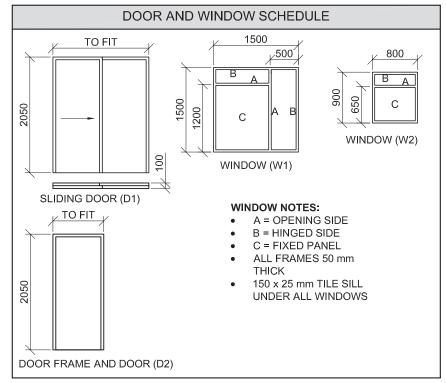
10 mm CEILING BOARDS ON 38 x 38 mm BRANDERING STRIPS @ 450 c/c

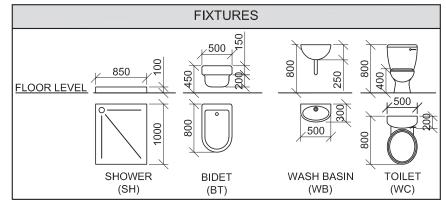


INCOMPLETE FOUNDATION AND EXTERNAL WALL DETAIL

ROOF COMPONENTS 300 x 75 mm BARGE BOARD 200 x 20 mm FASCIA BOARD ROOF CAP







QUESTION 4: CIVIL DRAWING

Given:

- The incomplete south east elevation of a new house, showing the walls, the sliding door and window openings, the roof and notes
- The incomplete floor plan showing the walls, positions of steps, doors, windows, fixtures and the electrical layout
- Schematic diagrams of the roof trusses and roof notes
- The incomplete foundation and external wall detail
- Room designations and floor finishes
- A table of roof components
- A table of electrical symbols
- A door and window schedule
- A table of fixtures
- The incomplete floor plan of the **new house**, drawn to scale 1:50, and the incomplete foundation and the breakline of the detailed section, drawn to scale 1:20, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50 the following views of the new house:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- ALL fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- ALL hatching detail

4.1.2 THE COMPLETE SOUTH-EAST ELEVATION

Show the following features on the drawing:

- The outside walls, sliding door, steps and window detail
- The roof detail, including the fascia boards, gutters, barge board, roof cap and rainwater downpipe
- The finished floor level
- 4.2 Using the incomplete foundation and breakline on page 6, draw, to scale 1 : 20, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The complete foundation and external wall detail
- The window detail
- The roof detail, including the fascia board, gutter and barge board
- The bidet
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

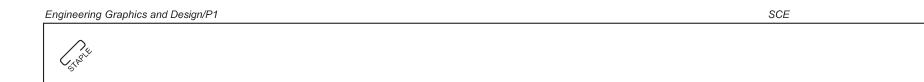
- The south-east elevation
- The room designations and floor finishes
- Ground level, finished floor level, damp-proof course and built-in cupboard (use the correct abbreviations and show them on all the relevant views)

ALL drawings must comply with the guidelines and graphical symbols as contained in the SANS 10143.

[95]



DBE/2018



1. MARK ALLOCATION FOR ROOF SECTION							
			ll L				
A (1)			N				
B (1)			Ì				
C (2)			١				
D (3)			5				
E (2)			-				
F (1)			L				
G (1)							
H (1)							
I (1)							
OTAL							
	•						

1 DOORS + WINDOWS

2 FIXTURES

3 ELECTRICAL

	FOR OFFICIAL USE O	NLY
	INCORRECT SCALE(S) USED	
	NON-ALIGNMENT OF VIEWS	
	VIEW(S) ROTATED	
	SECTION VIEWED INCORRECTLY	
	INCORRECT LETTERING	
\downarrow		
+		
	TOTAL	

ROOF LINE	
RWDP FLOOR PLAN SCALE 1 : 50	

2	WALLS + FFL +
3	DOOR + WINDO
4	LABELS
	SUBTOT
1	ROOF DETAIL
2	FOUNDATION + SLAB
3	WINDOW + SILI
/	

4	HATCHING	4						
5	LABELS	4 ½						
	SUBTOTAL	37						
	SOUTH E	AST EL	EVATIO	ON				
1	ROOF + RWDP	9 ½						
2	WALLS + FFL + STEPS	4 ½						
3	DOOR + WINDOW	8						
4	LABELS	1 ½						
	SUBTOTAL	23 ½						
	DETAILED SECTION							
1	ROOF DETAIL	13						
2	FOUNDATION + WALL + SLAB	7						
3	WINDOW + SILL	3 ½						
4	FIXTURES	$3\frac{1}{2}$						
5	HATCHING	6						
6	LABELS	1 ½						
	SUBTOTAL							
TOTAL 95								
PEI	NALTIES (-)							
GRAND TOTAL								
EXAMINATION NUMBER								
EXAMINATION NUMBER 6								

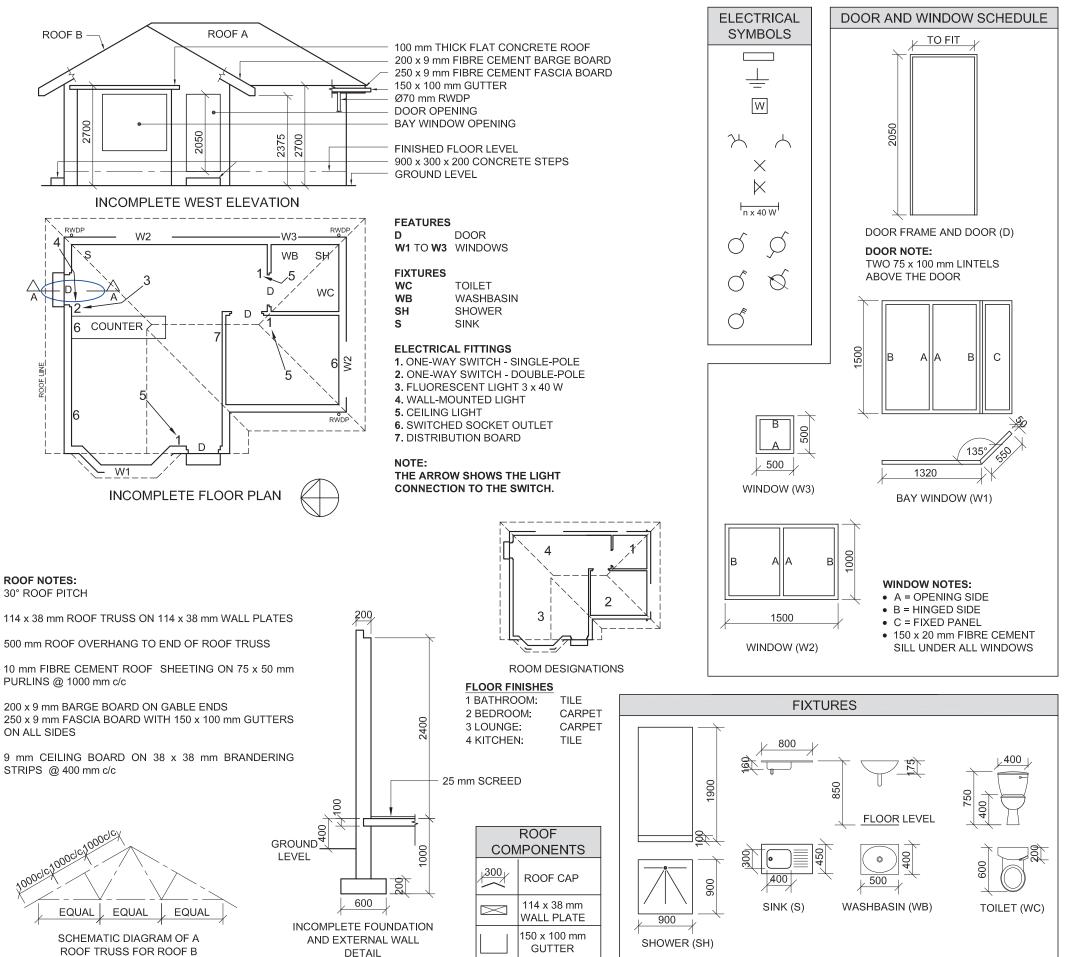
ASSESSMENT CRITERIA **FLOOR PLAN**

11

7 $10\frac{1}{2}$

SECTION A - A SCALE 1:20

Engineering Graphics and Design/P1 NSC DBE/November 2017



QUESTION 4: CIVIL DRAWING

Given

- The incomplete west elevation of a **new house**, showing the walls, the door and window openings, the roof and notes
- The incomplete floor plan showing the walls, positions of the doors, windows, fixtures and the electrical layout
- A schematic diagram of a roof truss and roof notes
- Room designations and floor finishes
- The incomplete foundation and external wall detail
- A table of roof components
- A table of electrical symbols
- A door and window schedule
- A table of fixtures
- The incomplete floor plan of the **new house**, drawn to scale 1:50, and the incomplete foundation of the detailed section, drawn to scale 1:20, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1 : 50, the following views of the **new house**:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- The fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- ALL hatching detail

4.1.2 THE COMPLETE WEST ELEVATION

Show the following features on the drawing:

- The outside walls, door and window detail
- The roof detail, including the barge boards, fascia boards, gutters and rainwater down-pipe
- The finished floor level
- 4.2 Using the incomplete foundation on page 6, draw, to scale 1 : 20, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The foundation and external wall detail
- The door detail
- The roof detail, including the fascia board and gutter
- The sink
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

- The west elevation
- The room designations and floor finishes
- Ground level, finished floor level and damp-proof course (use the correct abbreviations and show it on ALL the relevant views)

NOTE:

ALL drawings must comply with the **guidelines** and **graphical symbols** as contained in the *SANS 10143*. **[95]**

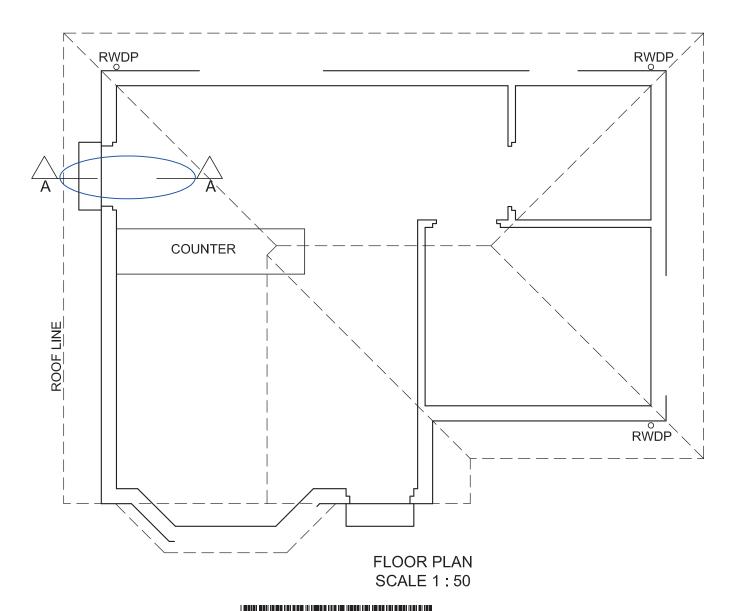
DBE/November 2017

NSC Engineering Graphics and Design/P1

FOR OFFICIAL USE ONLY	
INCORRECT SCALE	
NON-ALIGNMENT OF VIEWS	
VIEW(S) ROTATED	
SECTION VIEWED INCORRECTLY	
INCORRECT LETTERING	
TOTAL	

MARK ALLOCATION FOR ROOF SECTION										
Α	В	С	D	Е	F	G	Н	1	J	

	ASS	ESSMEN		RIA			
	FLOOR PLAN						
		POSSIBLE	OBTAINED	SIGN	MODERATED		
1	DOORS + WINDOWS	13½					
2	ELECTRICAL	9½					
3	FIXTURES	8½					
4	HATCHING	3					
5	LABELS	4					
;	SUBTOTAL	38½					
	V	VEST ELE	VATION				
1	ROOF + RWDP	12					
2	WALLS + FFL	6½					
3	DOOR + WINDOW	8					
4	LABELS	1½					
;	SUBTOTAL	28					
	DE	TAILED	SECTION	1			
1	ROOF DETAIL	11					
2	FOUNDATION + WALL + DOOR	9					
3	SINK	3					
4	HATCHING	4½					
5	LABELS	1					
:	SUBTOTAL	28½					
	TOTAL						
PEI	NALTIES (-)						
	GRAND TO	TAL					
	EX	OITANIMA	NUMBER				
EXAMINATION NUMBER 6							



DETAILED SECTION A-A

SCALE 1:20

Engineering Graphics and Design/P1 SCE DBE/2017

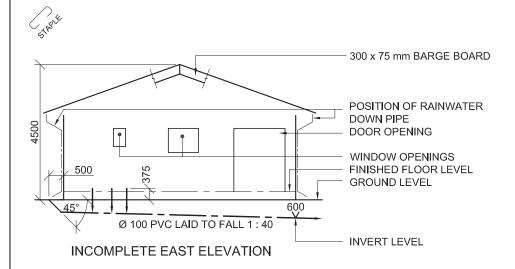
ELECTRICAL

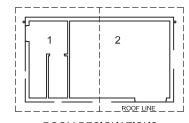
SYMBOLS

W

X

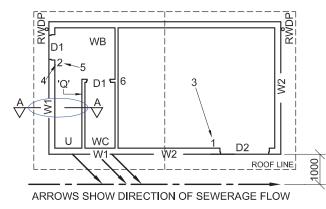
n x 40 W





ROOM DESIGNATIONS

FLOOR FINISHES 1. TOILET: 2. CHANGE ROOM: TILE



INCOMPLETE FLOOR PLAN

FEATURES

DOUBLE DOOR D2 W1 & W2 WINDOWS

FIXTURES

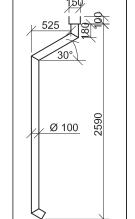
WC WB WASH BASIN

SINGLE WALL-MOUNTED URINAL

ELECTRICAL FITTINGS

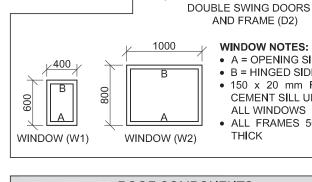
- 1. ONE-WAY SWITCH SINGLE-POLE 2. ONE-WAY SWITCH - DOUBLE-POLE
- 3. FLUORESCENT LIGHT 4 x 40 W
- 4. WALL-MOUNTED LIGHT
- 5 CEILING LIGHT
- 6. SWITCHED SOCKET OUTLET

THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH.



RAIN WATER

ITEMS



PLATE

BOARD

220 x 20 mm FASCIA

2100

• B = HINGED SIDE • 150 x 20 mm FIBRE **CEMENT SILL UNDER** ALL WINDOWS ALL FRAMES 50 mm THICK ROOF COMPONENTS 114 x 38 mm WALL 300 x 75 x 9 mm FIBRE

DOOR AND WINDOW SCHEDULE

DOOR FRAME AND DOOR (D1)

TO FIT

AND FRAME (D2)

WINDOW NOTES:

• A = OPENING SIDE

CEMENT BARGE BOARD

ROOF CAP

TO FIT 50

1150 clc × 1150 clc × 1150 clc × 1150 clc × EQUAL EQUAL | EQUAL EQUAL EQUAL ∠ EQUAL

SCHEMATIC DIAGRAM OF A **ROOF TRUSS**

ROOF NOTES:

ROOF PITCH 20°

114 x 38 mm ROOF TRUSS ON 114 x 38 mm

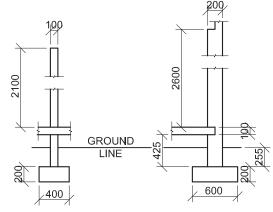
500 mm ROOF OVERHANG TO END OF ROOF TRUSS

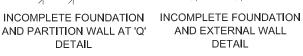
30 mm CORRUGATED ROOF SHEETING ON 75 x 50 mm PURLINS @ 1150 mm c/c

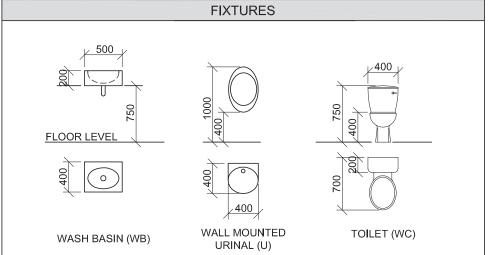
300 x 75 x 9 mm BARGE BOARD ON GABLE ENDS AND 220 x 20 mm FASCIA BOARD ON **BOTH SIDES**

100 x 150 mm GUTTER ON BOTH SIDES

9 mm CEILING BOARD ON 38 x 38 mm BRANDERING STRIPS @ 450 mm c/c







QUESTION 4: CIVIL DRAWING Given:

- The incomplete east elevation of a new change room and toilet showing the walls, the door and window openings, the roof and notes
- The incomplete floor plan showing the walls, positions of the doors, windows, fixtures and the electrical layout
- Schematic diagram of a roof truss and roof notes
- The incomplete foundation and wall detail
- Room designations and floor finishes
- A table of rainwater items
- A table of electrical symbols
- A door and window schedule
- A table of roof components
- A table of fixtures
- The incomplete floor plan of the new change room and toilet, drawn to scale 1:50, and the incomplete foundation of the external wall, drawn to scale 1:20, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new change room and toilet:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- The fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- The sewer lines
- ALL hatching detail

4.1.2 THE COMPLETE EAST ELEVATION Show the following features on the drawing:

- The outside walls, door and window detail
- The roof detail, including the barge boards and the rainwater down-pipes
- The finished floor level
- The sewer line
- 4.2 Using the incomplete foundation, draw, to scale 1: 20, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The complete foundation and external wall detail
- The complete foundation and partition wall detail
- The window detail
- The roof detail, including the fascia board, gutter, rainwater down-pipe and barge board
- ALL features and fixtures in front of the section
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

- The east elevation
- The room designations and floor finishes
- Ground level, finished floor level, rodding eye and damp-proof course (use the correct abbreviations and show it on ALL the relevant views)

NOTE:

ALL drawings must comply with the guidelines and graphical symbols as contained in the SANS 10143.

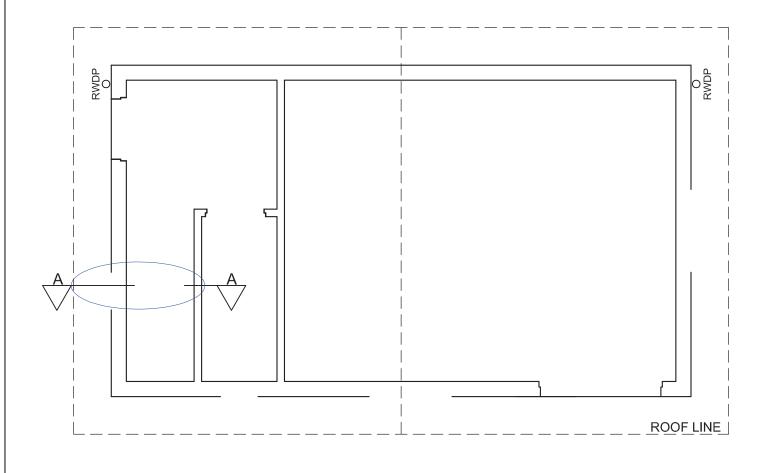


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Please turn over

Engineering Graphics and Design/P1 SCE DBE/2017





FLOOR PLAN SCALE 1 : 50 DETAILED SECTION A-A SCALE 1 : 20

FOR OFFICIAL USE ONLY INCORRECT SCALE EAST ELEVATION NOT ALIGNED VIEW(S) ROTATED SECTION VIEWED INCORRECTLY INCORRECT LETTERING PENALTIES TOTAL (-) MARK ALLOCATION FOR ROOF SECTION (4.2) A B C D E F G H I J K ASSESSMENT CRITERIA **FLOOR PLAN** POSSIBLE OBTAINED SIGN MODERATED DOORS + WINDOWS 12 2 ELECTRICAL 5 6 FIXTURES 4 HATCHING 3 $2\frac{1}{2}$ 5 LABELS 2 6 PLUMBING $30\frac{1}{2}$ SUBTOTAL **EAST ELEVATION** 1 ROOF + RWDP $6\frac{1}{2}$ $2\frac{1}{2}$ WALLS + FFL DOOR + WINDOW $9\frac{1}{2}$ 2 LABELS 5 PLUMBING 3 $23\frac{1}{2}$ SUBTOTAL **DETAILED SECTION** 1 ROOF DETAIL + 13 FOUNDATION + WALL + SLAB 13 $2\frac{1}{2}$ URINAL 6 HATCHING 1 1 2 5 LABELS 6 WINDOW 2 38 SUBTOTAL 92 TOTAL PENALTY (-) **GRAND TOTAL** EXAMINATION NUMBER

EXAMINATION NUMBER

6

Engineering Graphics and Design/P1 NSC DBE/Feb.-Mar. 2017

<u>√ 600</u>

В

WINDOW (W1)

1800

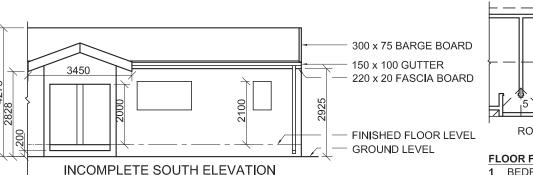
WINDOW (W2)

2100

WINDOW (W3)

∠ 450 _✓

500



W3

W3

INCOMPLETE FLOOR PLAN

115 x 38 mm ROOF TRUSSES ON 115 x 38 mm WALL PLATES

ROOF OVERHANG 350 mm TO END OF ROOF TRUSSES

ROOF COVER 15 mm FIBRE CEMENT SHEETING ON

220 x 20 mm FASCIA BOARD ON ALL SIDES AND

300 x 75 mm BARGE BOARD ON GABLED ENDS

ROOF COMPONENTS

300 x 75 mm BARGE BOARD

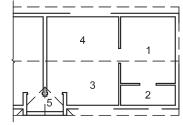
75 x 50 mm PURLINS @ 1000 mm c/c

150 x 100 mm GUTTERS ON ALL SIDES

ROOF NOTES:

@ 450 mm c/c

ROOF PITCH 20°

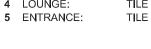


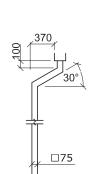
ROOM DESIGNATIONS

EL OOD EINIGHES

	OUR FINISHES	
1	BEDROOM:	CARPET
2	BATHROOM:	TILE
3	KITCHEN:	TILE

4 LOUNGE: TILE





RAINWATER DOWN-PIPE

FIXTURES TOILET WASH BASIN SHOWER SINK **ELECTRICAL FITTINGS** ONE-WAY SWITCH - DOUBLE-POLE

- ONE-WAY SWITCH THREE-POLE
- FLUORESCENT LIGHT 2 x 40 W
- **CEILING LIGHT**

FEATURES

D1

W1

W2

W3

WC

WB

SH

___RWDP

DOOR

WINDOW

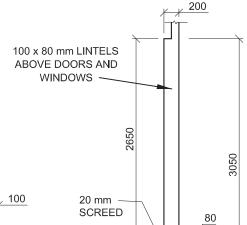
WINDOW

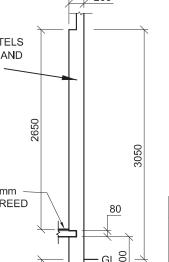
WINDOW

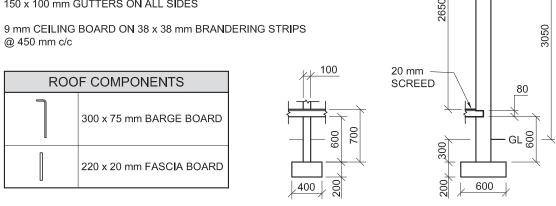
- 5 SWITCHED SOCKET OUTLET
 - WALL-MOUNTED LIGHT

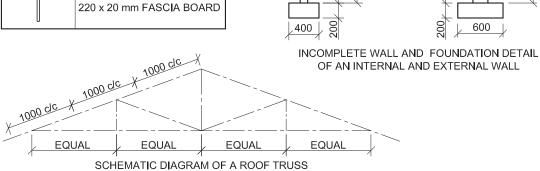
NOTE:

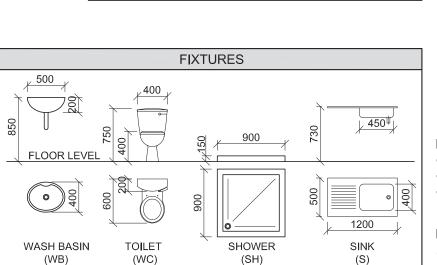
THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH.











QUESTION 4: CIVIL DRAWING

Given:

ELECTRICAL SYMBOLS

X

 \times

TO FIT

DOOR FRAME AND

DOOR (D1)

WINDOW NOTES:

• A = OPENING SIDE

B = FIXED PANEL

• ALL FRAMES 50 mm

150 x 20 mm FIBRE

CEMENT SILL UNDER ALL WINDOWS

n x 40 W

W

DOOR AND WINDOW SCHEDULE

∠ 450

_⊁ 500

- The incomplete south elevation of the eastern unit and entrance of a **new cluster house**, showing the walls, the door and window openings, the roof and notes
- The incomplete floor plan showing the walls, positions of the doors, windows, fixtures and electrical layout
- Roof notes, a table of roof components and a schematic diagram of a roof truss
- Room designations and floor finishes
- The incomplete wall and foundation detail
- The rainwater down-pipe
- A table of electrical symbols
- A door and window schedule
- A table of fixtures
- The incomplete floor plan of the eastern unit and entrance of the **new cluster house**, drawn to scale 1 : 50, and the incomplete external wall foundation and the break line of the detailed section. drawn to scale 1:20, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the given eastern unit and entrance of the new cluster

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- ALL fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- ALL hatching detail

4.1.2 THE COMPLETE SOUTH ELEVATION

Show the following features on the drawing:

- The outside walls, windows and door detail
- The roof detail, including the fascia board, barge boards. gutter and rainwater down-pipe
- The finished floor level
- 4.2 Using the incomplete foundation and break line on page 6, draw, to scale 1: 20, a DETAILED SECTION on cutting plane A-A of the area in the ellipse shown on the incomplete

Show the following features on the drawing:

- The wall and foundation detail of the internal and external wall
- The window detail
- The roof detail, including the fascia board, gutter and rainwater down-pipe
- ALL features and fixtures to the right (east) of the ellipse
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

- The south elevation
- The room designations and floor finishes
- Ground level, finished floor level and damp-proof course (use the correct abbreviations and show it on ALL the relevant views)

ALL drawings must comply with the guidelines and graphical symbols contained in the SANS 10143. [97]



Engineering Graphics and Design/P1 NSC DBE/Feb.-Mar. 2017 FOR OFFICIAL USE 1. MARK ALLOCATION FOR ONLY SECTION OF ROOF INCORRECT SCALE A (1) INCORRECT POSITIONING OF B (1) **VIEWS** C (2) ROTATED VIEWS D (3) PRINTED CAPITAL E (1) LETTERS F (1) G (1) H (1) I (3) **TOTAL TOTAL ASSESSMENT CRITERIA FLOOR PLAN** 1 DOORS + WINDOWS 11 $8\frac{1}{2}$ 2 ELECTRICAL 3 FIXTURES $7\frac{1}{2}$ 4 HATCHING 4 RWDP 5 LABELS 4 **SUBTOTAL** 35 **SOUTH ELEVATION** 1 ROOF $6\frac{1}{2}$ WALLS + RWDP + FFL + 2 WALLS GUTTER $7\frac{1}{2}$ $11\frac{1}{2}$ 3 DOORS + WINDOWS 4 LABELS 1 **SUBTOTAL** $26\frac{1}{2}$ **DETAILED SECTION** 1 ROOF 14 2 FOUNDATIONS + WALLS + SLAB 00 $13\frac{1}{2}$ $3\frac{1}{2}$ 3 WINDOW + LINTELS 4 FIXTURE 3 $1\frac{1}{2}$ 5 LABELS $35\frac{1}{2}$ **SUBTOTAL** 97 **TOTAL** RWDP PENALTIES (-) SECTION A-A **GRAND TOTAL** FLOOR PLAN SCALE 1:20 EXAMINATION NUMBER SCALE 1:50

6

EXAMINATION NUMBER

NSC

Engineering Graphics and Design/P1 -300 x 75 mm BARGE BOARD 150 x 100 mm GUTTER 200 x 20 mm FASCIA BOARD GARAGE OPENING FINISHED FLOOR LEVEL OF LIVING AREAS FINISHED FLOOR LEVEL OF GARAGE -GROUND LEVEL INCOMPLETE SOUTH ELEVATION **FEATURES** D1 DOOR RWDP SLIDING DOOR W3 W1 WINDOW W2 WINDOW W3 WINDOW **FIXTURES** WC TOILET WB WASH BASIN SH SHOWER SINK **ELECTRICAL FITTINGS** 1, ONE-WAY SWITCH - SINGLE-POLE 2. ONE-WAY SWITCH - DOUBLE-POLE 000 3. FLUORESCENT LIGHT 2 x 40 W 4. CEILING LIGHT W3 5. WALL-MOUNTED LIGHT 6. SWITCHED SOCKET OUTLET INCOMPLETE FLOOR PLAN THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH. 1000 clc 1000 clc 1000 clc **EQUAL** EQUAL | EQUAL | EQUAL SCHEMATIC DIAGRAM OF A ROOF TRUSS FOR THE GARAGE 200 / **ROOF NOTES:** 200 🗸 Ø80 ROOF PITCH 20° 200 x 80 mm 30° 115 x 38 mm ROOF TRUSSES ON LINTEL 115 x 38 mm WALL PLATES GL RAINWATER ROOF OVERHANG 300 mm TO END OF DOWN-PIPE **ROOF TRUSSES** ROOF COVER 40 mm IBR SHEETING ON **OPENING HEIGHT 2400** 75 x 50 mm PURLINS @ 1000 mm c/c 220 x 20 mm FASCIA BOARD ON ALL SIDES AND 300 x 75 mm BARGE BOARD ON GABLED ENDS 20 mm -SCREED 100 x 150 mm GUTTERS ON ALL SIDES 9 mm CEILING BOARDS ON 38 x 38 mm 300ر BRANDERING STRIPS @ 300 mm c/c 60°0

STEP 150 mm HIGH

INCOMPLETE FOUNDATION

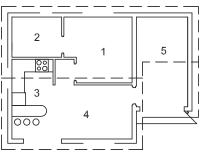
AND EXTERNAL WALL DETAIL

OF THE LIVING AREAS

INCOMPLETE FOUNDATION

AND EXTERNAL WALL DETAIL

OF THE GARAGE

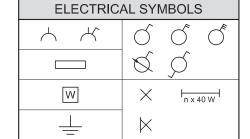


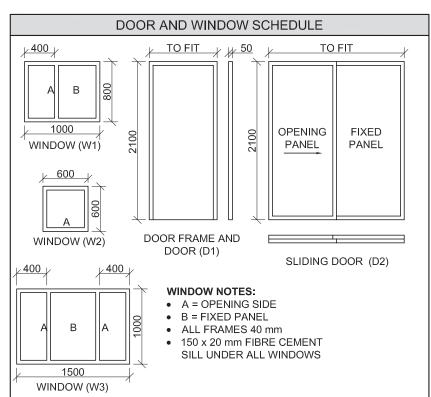
ROOM DESIGNATIONS

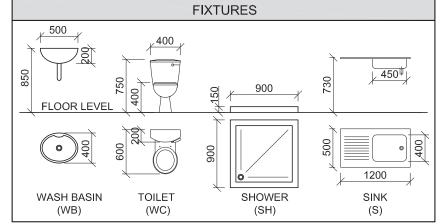
FLOOR FINISHES

- 1 BEDROOM: CARPET
 2 BATHROOM: TILE
 3 KITCHEN: TILE
- 4 LOUNGE/DINING ROOM: WOOD 5 GARAGE: GRANO

ROOF COMPONENTS 300 x 75 mm BARGE BOARD 220 x 20 mm FASCIA BOARD







QUESTION 4: CIVIL DRAWING

Given:

 The incomplete south elevation of a **new house**, showing the walls, the door, window and garage openings, the roof and notes

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- The incomplete floor plan showing the walls, positions of the doors, windows, fixtures and the electrical layout
- A schematic diagram of a roof truss and roof notes
- The incomplete foundation and external wall details of the living areas and the garage
- Room designations and floor finishes
- The rainwater down-pipe
- A table of roof components
- A table of electrical symbols
- A door and window schedule
- A table of fixtures
- The incomplete floor plan of the **new house**, drawn to scale 1 : 50, and the incomplete foundation and the break line of the detailed section, drawn to scale 1 : 20, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1 : 50, the following views of the **new house**:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- ALL fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- ALL hatching detail

4.1.2 THE COMPLETE SOUTH ELEVATION

Show the following features on the drawing:

- The outside walls, door and window details and the garage opening
- The roof detail, including the fascia boards, barge boards, gutters and rainwater down-pipes
- The finished floor level
- 4.2 Using the incomplete foundation and break line on page 6, draw, to scale 1: 20, a DETAILED SECTION on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The foundation, wall and garage opening detail
- The roof detail, including the fascia board and gutter
- ALL the external features of the **new house** to the left (west) of the ellipse
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

- The south elevation
- The room designations and floor finishes
- Ground level (use the correct abbreviation and show it on ALL the relevant views)

NOTE

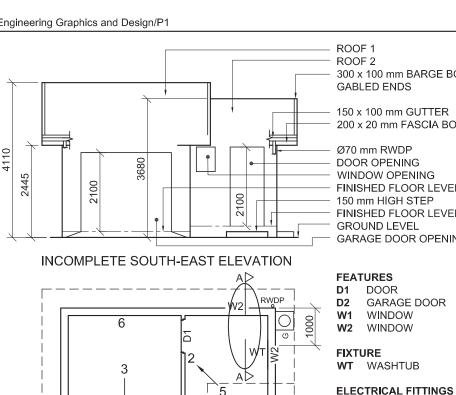
ALL drawings must comply with the **guidelines** and **graphical symbols** contained in the *SANS 10143*. [93]



Please turn over

Engineering Graphics and Design/P1 NSC DBE/November 2016 1. MARK FOR OFFICIAL USE **ALLOCATION** ONLY FOR SECTION OF ROOF INCORRECT SCALE A (1) INCORRECT POSITIONING OF B (1) VIEWS C (1) NON-ALIGNMENT OF VIEWS D (2) E (1) F (1) G (1) H (1) I (2) **TOTAL TOTAL ASSESSMENT CRITERIA FLOOR PLAN** 1 DOORS + WINDOWS 14 2 ELECTRICAL 11 RWDPo 3 FIXTURES 8 4 HATCHING 4 5 LABELS 5 42 **SUBTOTAL SOUTH ELEVATION** $5\frac{1}{2}$ 1 ROOF WALLS + RWDP + FFL 2 7 3 DOOR + WINDOW 10 \bigcirc 4 LABELS 1 00 $23\frac{1}{2}$ SUBTOTAL **DETAILED SECTION** 1 ROOF 11 FOUNDATION + WALLS + SLAB 7 GUTTER + RWDP 4 4 HATCHING 5 5 LABELS GARAGE OPENING $27\frac{1}{2}$ SUBTOTAL 93 **TOTAL** PENALTIES (-) **SECTION A-A GRAND TOTAL** RWDP 0 SCALE 1:20 **EXAMINATION NUMBER** FLOOR PLAN SCALE 1:50 **EXAMINATION NUMBER** 6 Copyright reserved

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D1

200

GROUND

LEVEL

600

INCOMPLETE FOUNDATION

AND EXTERNAL WALL

DETAIL OF THE WASHROOM

D2

20 mm SCREED

CONCRETE SLAB

ON 80 mm

600

INCOMPLETE FOUNDATION

AND EXTERNAL WALL DETAIL OF THE GARAGE

INCOMPLETE FLOOR PLAN

300 x 100 mm BARGE BOARD ON ALL

150 x 100 mm GUTTER 200 x 20 mm FASCIA BOARD

DOOR OPENING WINDOW OPENING FINISHED FLOOR LEVEL (GARAGE)

150 mm HIGH STEP FINISHED FLOOR LEVEL (WASHROOM) **GROUND LEVEL** GARAGE DOOR OPENING

1. ONE-WAY SWITCH - DOUBLE-POLE

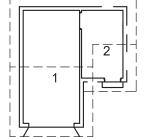
3. FLUORESCENT LIGHT 2 x 40 W

6. SWITCHED SOCKET OUTLET

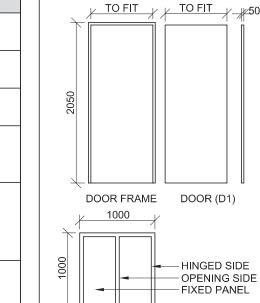
2. TWO-WAY SWITCH

5. CEILING LIGHT

4. WALL-MOUNTED LIGHT

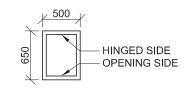


ROOM DESIGNATIONS



DOOR AND WINDOW SCHEDULE

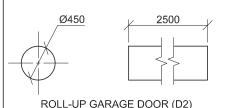
WINDOW FRAME (W1)



WINDOW FRAME (W2)



150 x 20 mm FIBRE CEMENT SILL UNDER ALL WINDOWS



ROOF CAP WALL PLATE

75 x 50 mm PURLIN

150 x 100 mm GUTTER

ROOF COMPONENTS

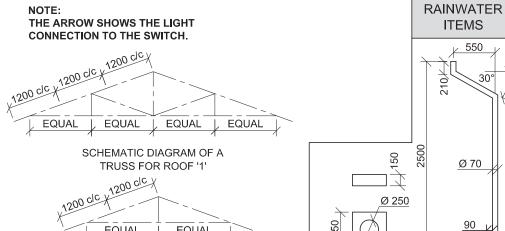
300 x 100 mm FIBRE CEMENT BARGE BOARD 200 x 20 mm FASCIA BOARD

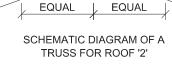
ELECTRICAL SYMBOLS

FLOOR FINISHES

GRANO 1 GARAGE: 2 WASHROOM: TILE

W X X \times n x 40 W \bigcirc





ROOF NOTES: ROOF PITCH 20°

200 x 20 mm FASCIA BOARD ON ALL SIDES AND 300 x 20 mm BARGE BOARD ON THE GABLED ENDS

ROOF COVER 15 mm FIBRE CEMENT SHEETING ON 75 x 50 mm PURLINS SPACED ACCORDING TO SCHEMATIC DIAGRAMS

114 x 38 mm ROOF TRUSS ON 114 x 38 mm WALL PLATES

9 mm CEILING BOARD ON 38 x 38 mm BRANDERING STRIPS @ 400 mm c/c

100 x 150 mm GUTTER ON ALL SIDES

FIXTURE 600 /400 L 750 WASH TUB (WT)

RWDP

, 450

GULLEY (G)

QUESTION 4: CIVIL DRAWING Given:

- The incomplete south-east elevation of a new garage and washroom showing the walls, the garage door opening, the door and window openings, the roof and notes
- The incomplete floor plan showing the walls, position of the doors, windows, fixture and the electrical layout
- The incomplete foundation and external wall detail of the garage and of the washroom
- Room designations and floor finishes
- Schematic diagrams of the TWO types of roof trusses and
- A table of electrical symbols
- A table of rainwater items
- A table of the fixture
- · A door and window schedule
- A table of roof components
- The incomplete floor plan of the new garage and washroom, drawn to scale 1:50, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new garage and washroom:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- The fixture as indicated by the abbreviation
- ALL electrical fittings as indicated by numbers
- ALL hatching detail

4.1.2 THE COMPLETE SOUTH-EAST ELEVATION Show the following features on the drawing:

- The outside walls, door and window detail
- The roof detail, including the fascia boards, barge boards, gutters, rainwater down-pipe and gullev
- The finished floor level
- 4.2 In the space provided, draw, to scale 1:20, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The complete foundation and external wall detail
- The window detail, with a DOUBLE lintel
- The roof detail, including the fascia board and gutter
- ALL features and fixtures to the right of the section
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

- The south-east elevation
- The room designations and floor finishes
- Using the correct abbreviations, label the following features in the correct view: ground level, finished floor level and damp-proof course.

NOTE:

- Planning is essential.
- ALL drawings must comply with the guidelines and graphical symbols as contained in the SANS 10143.

[91]





DBE/Feb.-Mar. 2016



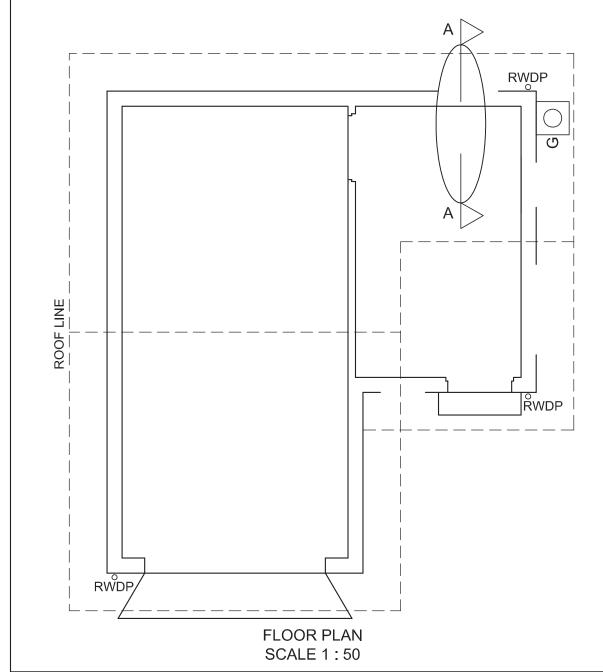
	I CD. IVIC	11. 2010
FOR OFFICIAL USE ONLY		
INCORRECT SCALE(S)		
NON-ALIGNMENT OF VIEWS		
VIEW(S) ROTATED		
SECTION VIEWED INCORRECTLY		
INCORRECT LETTERING		
TOTAL PENALTIES (-)		

MARK ALLOCATION FOR SECTION OF ROOF (4.2 No 1)												
Α	В	С	D	Е	F	G	Н	ı	J	К	L	

ASSESSMENT CRITERIA											
	FLOOR PLAN										
		POSSIBLE	OBTAINED	SIGN	MODERATE						
1	DOORS + WINDOWS	12									
2	ELECTRICAL	8									
3	FIXTURE	2									
4	HATCHING	4									
5	LABELS	2									
;	SUBTOTAL	28									
	SOUTH-EAST ELEVATION										
1	ROOF + RWDP	9									
2	WALLS + FFL + GULLEY + STEP + RAMP	6 1									
3	DOOR + WINDOW	$7\frac{1}{2}$									
4	LABELS	2									
;	SUBTOTAL	25									
	DE	TAILED	SECTION	I							
1	ROOF DETAIL + RWDP	16									
2	FOUNDATION + WALL + SLAB + LINE BREAK	9									
3	WINDOW + WT	8									
4	HATCHING	4									
5	LABELS	1									
;	SUBTOTAL	38									
	TOTAL	91									
то	TAL PENALTIES	S (-)									
	GRANE	TOTAL									
EXAMINATION NUMBER											

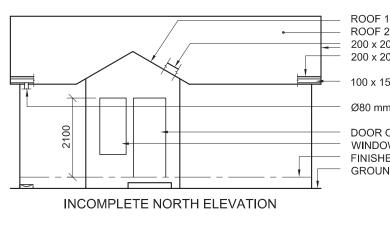
EXAMINATION NUMBER

6



DETAILED SECTION ON A-A SCALE 1:20

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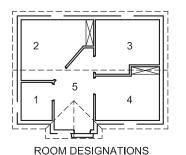


ROOF 2 200 x 20 mm BARGE BOARD 200 x 20 mm FASCIA BOARD

100 x 150 mm GUTTER

Ø80 mm RWDP

DOOR OPENING WINDOW OPENING FINISHED FLOOR LEVEL GROUND LEVEL



FLOOR FINISHES

1 TOILET: TILE

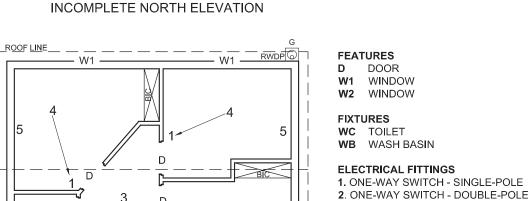
2 ROOM 1: CARPET

3 ROOM 2: CARPET

4 ROOM 3: CARPET

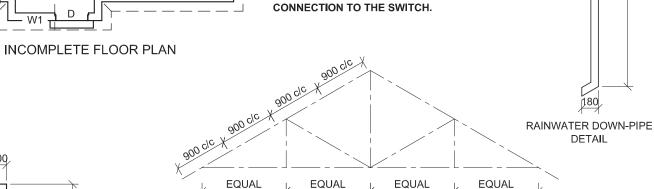
5 RECEPTION: TILE

Ø80

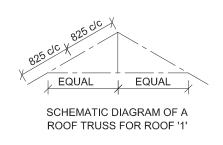


- 3. FLUORESCENT LIGHT 2 x 40 W 4. CEILING LIGHT
- 4. CEILING LIGHT

 5. SWITCHED SOCKET OUTLET
- NOTE: THE ARROW SHOWS THE LIGHT



SCHEMATIC DIAGRAM OF A ROOF TRUSS FOR ROOF '2'



ROOF PITCH 30°

 $200 \times 20 \ \text{mm}$ FASCIA BOARD ON ALL SIDES AND $200 \times 20 \ \text{mm}$ BARGE BOARD ON THE GABLED ENDS

ROOF COVER 15 mm FIBRE CEMENT SHEETING ON 75 x 50 mm PURLINS SPACED ACCORDING TO SCHEMATIC DIAGRAMS

114 x 38 mm ROOF TRUSSES ON $\,$ 114 x 38 mm WALL PLATES

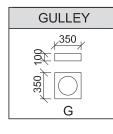
9 mm CEILING BOARD ON 38 x 38 mm BRANDERING STRIPS @ 600 mm c/c

100 x 150 mm GUTTER ON ALL SIDES

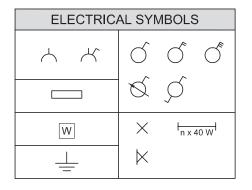
WINDOW (W1) B OOOR FRAME AND DOOR (D) WINDOW (W2)

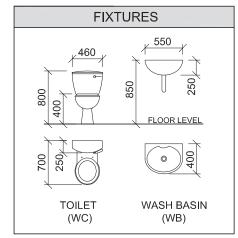
WINDOW NOTES:

- A = OPENING SIDE
- B = HINGED SIDE
- C = FIXED PANEL
- 150 x 25 mm FIBRE CEMENT SILL UNDER ALL WINDOWS



ROOF COMPONENTS 38 x 38 mm BRANDERING 114 x 38 mm WALL PLATE 75 x 50 mm PURLINS





QUESTION 4: CIVIL DRAWING

Given:

- The incomplete north elevation of **new consulting rooms**, showing the walls, the door and window openings, the roof and notes
- The incomplete floor plan showing the walls, positions of the doors, windows, fixtures and electrical layout
- The incomplete foundation and external wall detail
- Room designations and floor finishes
- The rainwater down-pipe detail
- Schematic diagrams of the TWO types of roof trusses and roof notes
- A window and door schedule
- The gulley detail
- A table of roof components
- A table of electrical symbols
- A table of fixtures
- The incomplete floor plan of the **new consulting rooms**, drawn to scale 1:50, on page 6

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1 : 50, the following views of the **new consulting rooms**:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- ALL fixtures as indicated by abbreviations
- ALL electrical fittings as indicated by numbers
- ALL hatching detail

4.1.2 THE COMPLETE NORTH ELEVATION

Show the following features on the drawing:

- The outside walls, door and window detail
- The roof detail, including the fascia boards, barge boards, gutters, rainwater down-pipe and gulley
- The finished floor level
- 4.2 In the space provided, draw, to **scale 1 : 20**, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.

Show the following features on the drawing:

- The complete foundation and external wall detail
- The roof detail, including the fascia board and gutter
- ALL features and fixtures to the left of the section
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

- The north elevation
- The room designations and floor finishes
- Using the correct abbreviations, label the following features in the correct view: ground level, damp-proof course and the finished floor level

NOTE:

- Planning is essential.
- ALL drawings must comply with the guidelines and graphical symbols as contained in the SANS 10143. [96]



Please turn over

GROUND LEVEL:

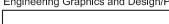
600

INCOMPLETE FOUNDATION

AND EXTERNAL WALL DETAIL

WC

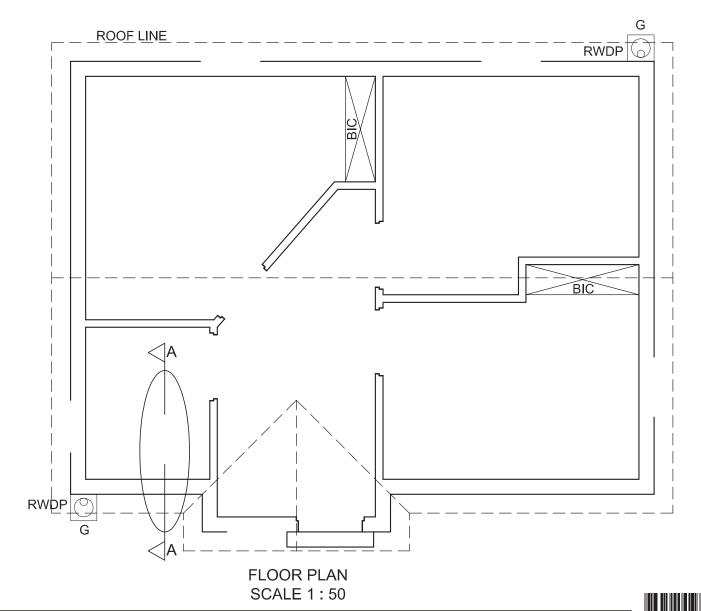
Engineering Graphics and Design/P1 NSC



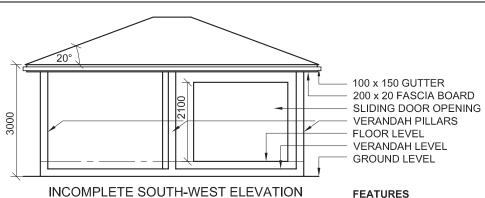
FOR OFFICIAL USE ONLY							
INCORRECT SCALE(S)							
NON-ALIGNMENT OF VIEWS							
FEATURES DRAWN IN FREEHAND							
TOTAL PENALTIES (-)							

MARK ALLOCATION FOR SECTION OF ROOF (4.2 No. 1)											
Α	В	С	D	Е	F	G	Н	1	J		

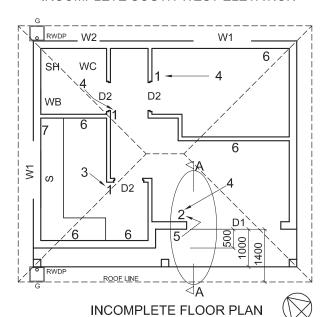
	ASS	ESSME	T	CRI	TE	RIA		
		FLOOF	R PI	LAI	1			
		POSSIBLE	0	BTAI	NED	SIGN	MODE	RATE
1	DOORS + WINDOWS	15						
2	ELECTRICAL	9						
3	FIXTURES	4						
4	HATCHING	4						
5	LABELS	5						
	SUBTOTAL	37						
	N	ORTH E	LE\	/AT	101	1	•	
1	ROOF	8½						
2	WALLS + RWDP + FFL + GULLEY	6½						
3	DOOR + WINDOW	6						
4	LABELS	1½						
	SUBTOTAL	22½						
	DI	ETAILED	SE	EC1	101	١	•	
1	ROOF DETAIL	11						
2	FOUNDATION + WALL + RWDP + GULLEY + LINE BREAK	11						
3	WINDOW + WC + WB	9½						
4	HATCHING	4						
5 LABELS		1						
	SUBTOTAL	36½						
	TOTAL							
TC	TAL PENALTIE:	S (-)						
	GRAND	TOTAL	Ŀ					
	E	XAMINATIO	1 NC	NUM	BER			
	E'	XAMINATIO	א ואר	JI 11\1	BEP			6
				4OIVI	DEK			U



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INCOMPLETE SOUTH-WEST ELEVATION



ROOF NOTES:

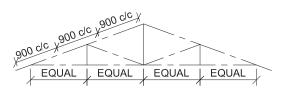
ROOF PITCH 20° WITH 200 x 20 mm FACIA BOARD ON ALL SIDES

ROOF COVER 15 mm FIBRE CEMENT SHEET ON 75 x 50 mm PURLINS @ 900 mm c/c

115 x 38 mm ROOF TRUSS ON 115 x 38 mm WALL PLATES

9 mm CEILING BOARD ON 38 x 38 mm BRANDERING STRIPS @ 600 mm c/c

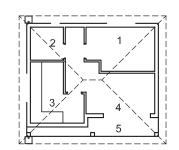
100 x 150 mm GUTTER ON ALL SIDES



SCHEMATIC DIAGRAM OF A ROOF TRUSS

FLOOR FINISHES

1 BEDROOM: CARPET 2 BATHROOM: TILE 3 KITCHEN: TILE 4 LOUNGE: TILE 5 VERANDAH: GRANO



ROOM DESIGNATIONS

ELECTRICAL FITTINGS

SHOWER

SINK

WASH BASIN

SLIDING DOOR INTERNAL DOOR

WINDOW

WINDOW

- 1. LIGHT SWITCH SINGLE-POLE
- 2. LIGHT SWITCH DOUBLE-POLE
- 3. FLUORESCENT LIGHT 2 x 40 W
- 4. CEILING LIGHT
- 5. WALL MOUNTED LIGHT
- 6. SWITCHED SOCKET OUTLET
- 7. DISTRIBUTION BOARD

NOTE:

D2

W2

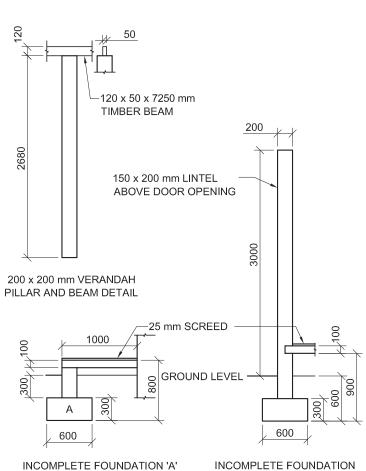
WB

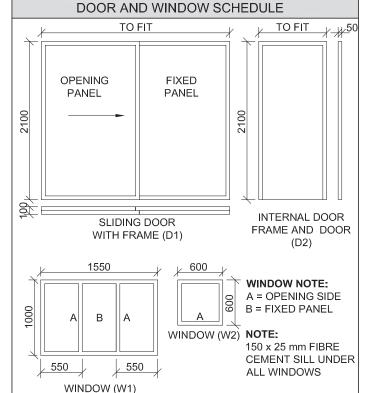
SH

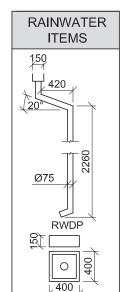
FIXTURES WC TOILET

THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH.

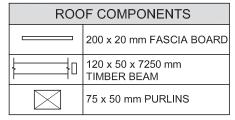
AND VERANDAH DETAIL

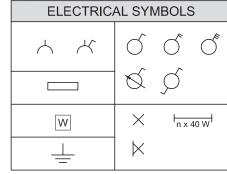


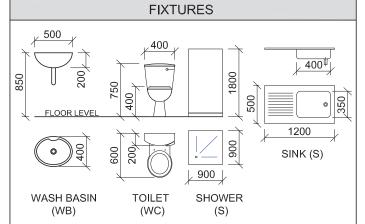




GULLY (G)







QUESTION 4: CIVIL DRAWING

Given:

- The incomplete south-west elevation of a **new cottage**, showing the walls, the verandah pillars, the sliding door opening, the roof and notes
- The incomplete floor plan showing the walls, position of the verandah pillars, doors, windows, fixtures and electrical layout
- Roof notes with a schematic diagram of a roof truss
- Room designations and floor finish
- Verandah pillar and beam detail
- The incomplete foundation 'A' and verandah detail
- The incomplete foundation and external wall detail
- A door and window schedule
- A table of rainwater items
- A table of roof components
- A table of electrical symbols
- A table of fixtures
- The incomplete foundation 'A' and floor plan of the new cottage, drawn to scale 1:50, on page 6

Instructions:

Answer this guestion on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the **new cottage**:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- ALL fixtures as indicated by abbreviations
- ALL electrical fittings as indicated by numbers
- ALL hatching detail

4.1.2 THE SOUTH-WEST ELEVATION

Show the following features on the drawing:

- The outside walls, verandah and sliding door detail
- The roof detail, including the fascia board, gutter, rainwater down pipe and gully
- The finished floor level
- 4.2 Using the given incomplete foundation 'A', draw, to scale 1: 20, a DETAILED SECTION on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.
 - Show the following features on the drawing:
 - The complete foundation 'A' and verandah detail
 - The complete foundation, external wall and sliding door
 - The roof detail, including the fascia board and gutter
 - ALL features of the verandah to the left of cutting plane A-A, including the rainwater down pipe and gully
 - ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:

- The south-west elevation
- The room designations and floor finishes
- Using the correct abbreviations, label the following features in the correct view: ground level and finished floor level.

ALL drawings must comply with the guidelines and graphical symbols contained in the SANS 10143. [94]



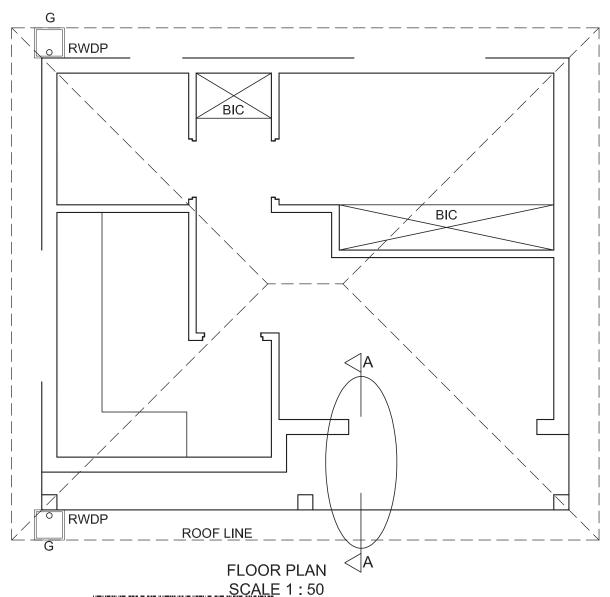
AND EXTERNAL WALL DETAIL

Please turn over

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PENALTIES	
INCORRECT OVERALL SCALE	
INCORRECT POSITIONING OF VIEWS	
NON-ALIGNMENT OF VIEWS	
TOTAL PENALTIES (-)	

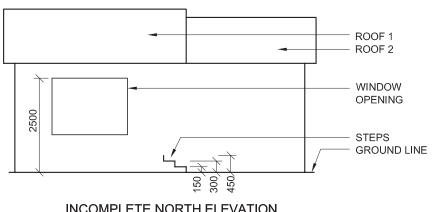


	ASS	FLOOR	T CRITEI	RIA	
		POSSIBLE	OBTAINED	SIGN	MODERATE
1	DOORS + WINDOWS	12			
2	ELECTRICAL	10			
3	FIXTURES	4			
4	HATCHING	4			
5	LABELS	5			
	SUBTOTAL	35			
	SOU ⁻	TH-WEST	ELEVAT	ION	
1	ROOF	6½			
2	WALLS + RWDP + FFL + GULLY	9			
3	DOOR	3			
4	LABELS	1½			
	SUBTOTAL	20			
	DI	ETAILED	SECTION	1	
1	ROOF DETAIL	12			
2	FOUNDATIONS + WALLS + SLAB	111/2			
3	DOOR + GULLY RWDP + GUTTER	9			
4	HATCHING	6½			
	SUBTOTAL	39			
	TOTAL	94			
	TOTAL PENAL	TIES (-)			
	FINAL TO	TAL			
	E	XAMINATIO	N NUMBER		
		V A B 415 ! A T : A	N NUMBER		16

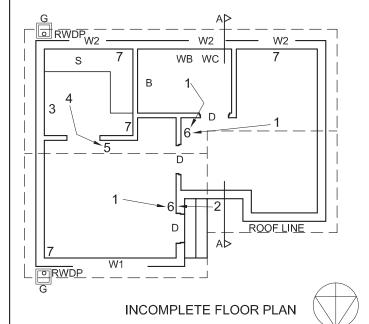


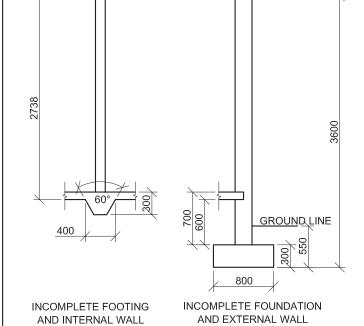
DETAILED SECTION SCALE 1:20

DBE/November 2014 Engineering Graphics and Design/P1 NSC



INCOMPLETE NORTH ELEVATION





DETAIL

TRUSS HEIGHT

FEATURES

DOOR W1 WINDOW W2 WINDOW

FIXTURES

SINK

В **BATH**

BIC BUILT-IN CUPBOARD (600 mm deep)

WC TOILET

WB WASH BASIN

ELECTRICAL FIXTURES

1. CEILING LIGHT

- 2. WALL-MOUNTED LIGHT
- 3. DISTRIBUTION BOARD
- 4. FLUORESCENT LIGHT 2 X 40 W 5. LIGHT SWITCH - SINGLE-POLE
- 6. LIGHT SWITCH TWO-POLE
- 7. SWITCHED SOCKET OUTLET

NOTE:

THE ARROWS SHOW THE LIGHT CONNECTION TO THE SWITCHES.

ROOF NOTES:

ROOF PITCH 20°

ROOF COVER 15 mm FIBRE CEMENT SHEET ON 75 x 50 mm PURLINS

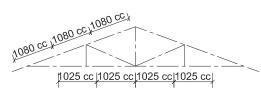
115 x 38 mm ROOF TRUSS ON 115 x 38 mm WALL PLATES

9 mm CEILING BOARD ON 38 x 38 mm **BRANDERING STRIPS**

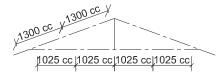
200 x 25 mm FASCIA BOARDS WITH 150 x 100 mm GUTTER ON BOTH ENDS

Ø100 mm RAIN-WATER DOWN PIPE

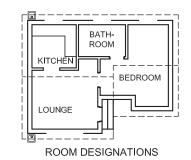
400 x 400 x 200 mm GULLY



SCHEMATIC DIAGRAM OF A TRUSS FOR ROOF '1'

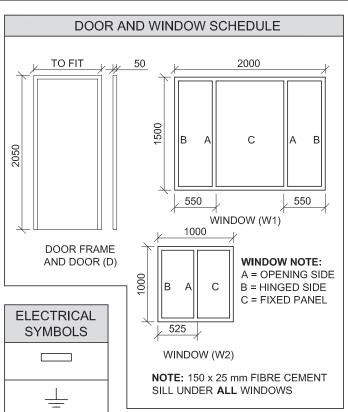


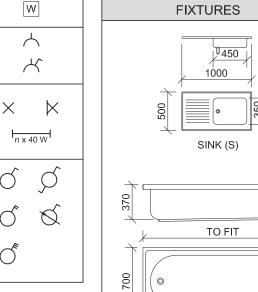
SCHEMATIC DIAGRAM OF A TRUSS FOR ROOF '2'

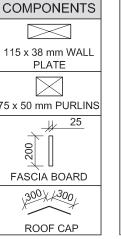


FLOOR FINISHES

KITCHEN: TILES CARPET LOUNGE: BATHROOM: TILES BEDROOM: CARPET







ROOF

BATH TUB (B) 550 TOILET (WC) WASHBASIN (WB)

QUESTION 4: CIVIL DRAWING

Given:

- The incomplete north elevation of a new dwelling, showing the walls, the roof and notes
- The incomplete floor plan showing the walls, position of the doors and windows, the fixtures and electrical layout
- The incomplete detail of the footing/foundation of an internal and an external wall
- Roof notes with schematic diagrams of the TWO types of roof trusses
- A diagram showing the room designations and a list of floor finishes
- A door and window schedule
- A table of electrical symbols
- A table of roof components
- A table of fixtures
- The incomplete floor plan of the new dwelling, drawn to scale 1 : 50, on page 6

Instructions:

- Answer this question on page 6.
- Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new dwelling:

4.1 The complete floor plan

4.2 The complete north elevation

4.3 A sectional elevation on cutting plane A-A

• ALL drawings must comply with the guidelines and graphical symbols contained in the SANS 10143.

SPECIFICATIONS:

THE FLOOR PLAN

Add the following features to the drawing:

- ALL the doors and windows
- ALL the fixtures as indicated by abbreviations
- ALL the electrical fittings as indicated by numbers
- ALL hatching detail

THE NORTH ELEVATION

Show the following features on the drawing:

- The outside walls, steps and finished floor level
- The roof detail, including the fascia board, gutter, rainwater down pipe and gully
- The window detail

THE SECTIONAL ELEVATION

Show the following features on the drawing:

- The complete footing or foundation, wall, roof and ceiling
- The window detail, with a DOUBLE lintel
- ALL features to the west of the cutting plane
- ALL hatching detail

Label the following:

- The room designations and floor finishes
- The sectional elevation and the north elevation
- Using the correct abbreviations, label the following features in the correct view: ground level, finished floor level and damp-proof course.

ONLY the substructure hatching may be drawn in neat freehand.

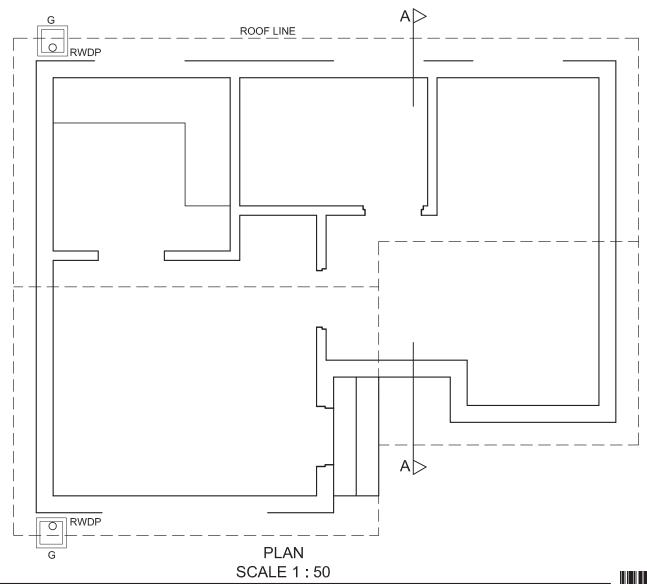


DETAIL

Engineering Graphics and Design/P1 NSC

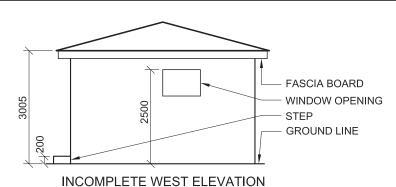


BBE/110 Volliger 2011						
PENALTIES						
INCORRECT OVERALL SCALE						
INCORRECT POSITIONING OF VIEWS						
NON-ALIGNMENT OF VIEWS						
TOTAL						



ASSESSMENT CRITERIA										
		FLOOR	PLAN							
		POSSIBLE	OBTAINED	SIGN	MODERA	ATE				
1	LABELS	4								
2	ELECTRICAL	9								
3	DOORS + WINDOWS	11								
4	FIXTURES	4								
5	HATCHING	4								
	SUBTOTAL	32								
	NO	ORTH EL	EVATION	1						
1	WALLS + FFL	5								
2	ROOF + FACIA BOARD + GUTTER + RWDP	7								
3	WINDOW	5½								
4	LABELS	1½								
	SUBTOTAL	19								
	SEC.	TIONAL I	ELEVATI	ON						
1	ROOF + FACIA BOARD + GUTTER + RWDP	15								
2	WALLS + FLOOR + FOUNDATION	18								
3	HATCHING	6½								
4	LABELS	21/2								
	SUBTOTAL	42								
PENALTIES (-)										
TOTAL 93										
	EX	AMINATIO	N NUMBER							
	EXAMINATION NUMBER 6									

Engineering Graphics and Design/P1 EXEMPLAR 2014



WĆ

WC

WC

WC

WB

WB

W1

ROOF LINE

W2

FEATURES

D DOOR W1 WINDOW W2 WINDOW

FIXTURES WC TOILET **WB** WASH BASIN U URINAL

ROOF NOTES:

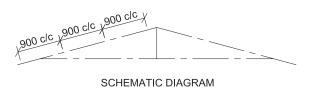
ROOF PITCH 15° WITH 200 x 20 mm FASCIA BOARD ON ALL SIDES

ROOF COVER 15 mm FIBRE CEMENT SHEET ON 75 x 50 mm PURLINS @ 900 mm c/c

115 x 38 mm ROOF TRUSS ON 115 x 38 mm WALL

PLASTER CEILING BOARD ON 38 x 38 mm BRANDERING STRIPS @ 700 mm c/c

100 x 100 mm GUTTER ON ALL SIDES



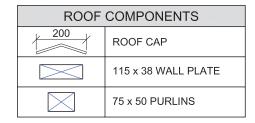
OF A ROOF TRUSS

ELECTRICAL FITTINGS:

- 1. LIGHT SWITCH THREE-POLE
- 2. LIGHT SWITCH DOUBLE-POLE
- 3. FLUORESCENT LIGHT 3 X 40 W
- 4. CEILING LIGHT
- 5. WALL MOUNTED LIGHT
- 6. SWITCHED SOCKET OUTLET

NOTE:

THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH



150 x 20 FIBRE CEMENT SILL UNDER ALL

DOOR FRAME AND DOOR

FOR TOILETS

1000

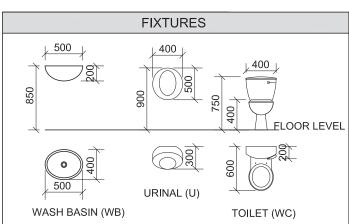
WINDOW (W1)

900

NOTES

WINDOWS

WINDOW FRAME PROFILE 20 20 30 30 10 50



DOOR AND WINDOW SCHEDULE **ELECTRICAL** SYMBOLS TO FIT

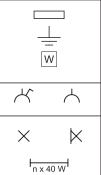
500

WINDOW (W2)

OPEN OUT-

HINGED-

OPEN IN



Q

RAINWATER

ITEMS

GUTTER

RWDP

GULLY (G)

400

150

18°

76

Ĺ

toilets • A door and window schedule • A table of roof components

Given:

- A table of the wooden window frame profile
- A table of fixtures
- A table of electrical symbols

QUESTION 4: CIVIL DRAWING

showing the walls, the roof and notes

- A table of rainwater items
- The incomplete plan of the new public toilets, drawn to scale 1 : 50, on page 6

• The incomplete west elevation of a new public toilets,

• The incomplete floor plan showing the walls, position of the

• The incomplete foundation/footing, slab and wall detail of the

three walls to be used in the construction of the new public

doors and windows, fixtures and electrical layout

• Roof notes and a schematic diagram of a roof truss

Instructions:

Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new public toilets:

4.1.1 THE COMPLETE FLOOR PLAN

Add the following features to the drawing:

- ALL the doors and the window
- ALL fixtures as indicated by abbreviations
- The electrical layout as indicated by numbers
- ALL hatching detail

4.1.2 THE WEST ELEVATION

Show the following features on the drawing:

- The outside walls and window detail
- The roof detail including the fascia board, gutter, rainwater down pipe and gully
- The finished floor level
- 4.2 Draw, to scale 1:20, a **DETAILED SECTION** on cutting plane A-A of the area in the ellipse shown on the floor plan on page 6.

Show the following features on the drawing:

- The complete foundation and external wall detail
- The complete footing and wall A detail
- The roof detail
- The window detail with a double lintel
- ALL features to the east of the cutting plane A-A
- ALL hatching detail. ONLY the substructure hatching may be drawn in freehand.

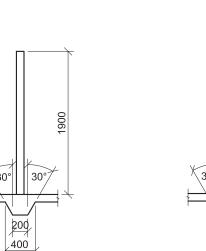
Label the following:

- The west elevation
- The room designations and floor finish (tiles)
- Using correct abbreviations, label the following features in the correct view: ground level, finished floor level and damp-proof course.

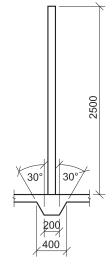
NOTE:

• ALL drawings must comply with the guidelines and graphic symbols contained in the SANS 10143.

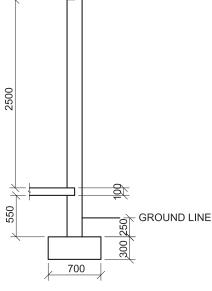




WALL (A) INCOMPLETE FOOTING, SLAB AND WALL DETAIL OF THE INTERNAL WALLS BETWEEN THE CUBICLES AND THE URINALS



WALL (B) INCOMPLETE FOOTING, SLAB AND INTERNAL WALL DETAIL

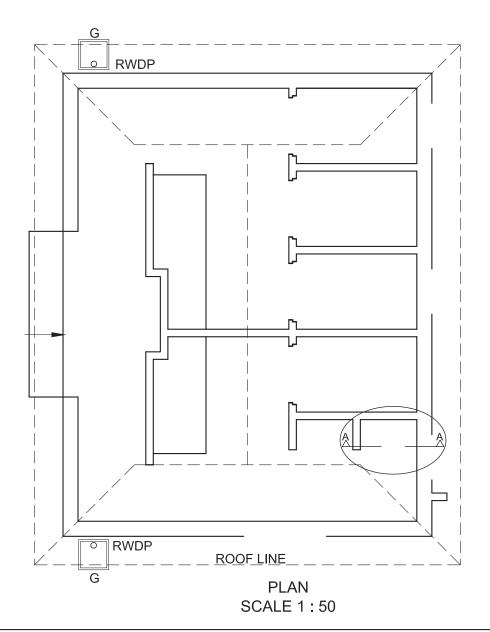


AND EXTERNAL WALL DETAIL

INCOMPLETE FOUNDATION, SLAB

- GROUND LINE



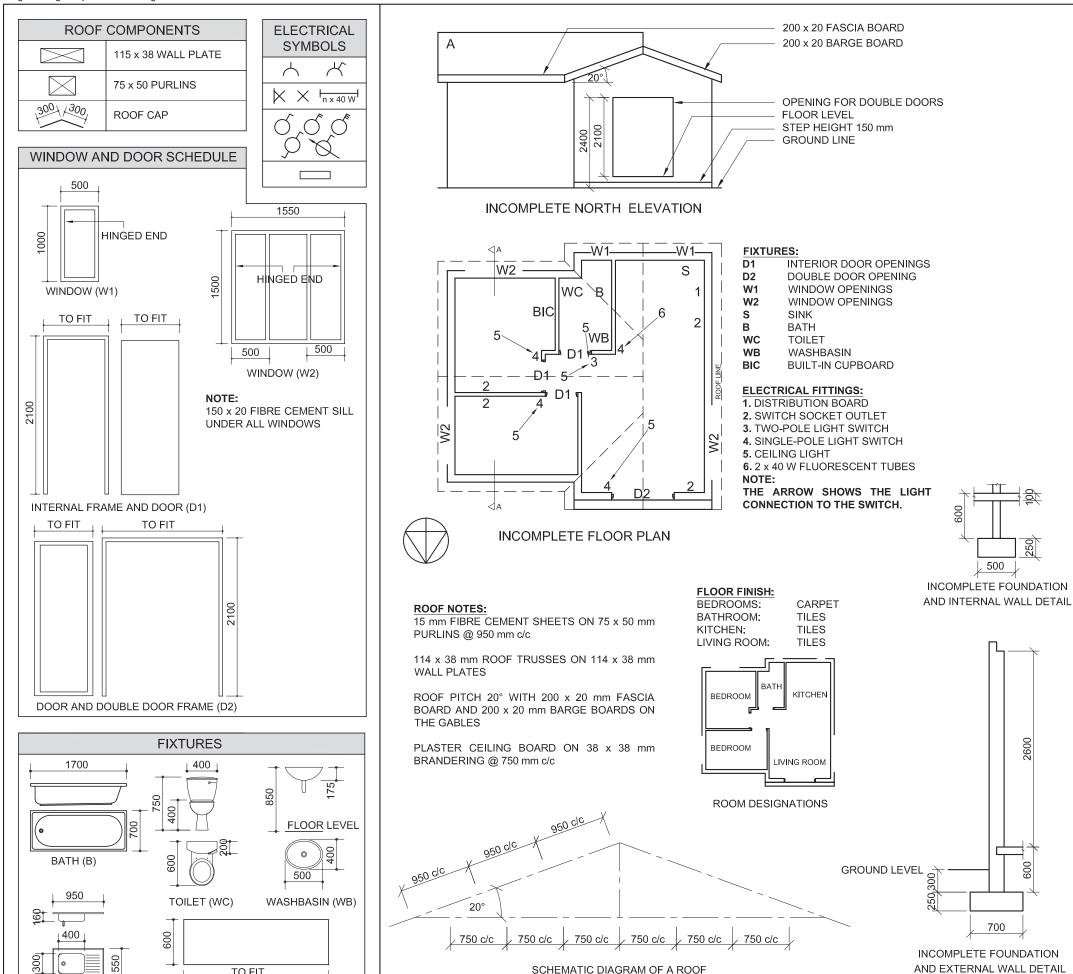


ASSESSMENT CRITERIA									
	PLAN								
		POSSIBLE	OBTAINED	SIGN	MODERATE				
1	DOORS + WINDOWS	12							
2	ELECTRICAL	7							
3	FIXTURES	8							
4	HATCHING	4							
5	LABELS	1							
	SUBTOTAL	32							
	V	VEST ELE	EVATION						
1	ROOF	6							
2	WALLS + RWDP + FFL + G + STEP	5							
3	WINDOW	5							
4	LABELS	2							
	SUBTOTAL	18							
	DE	TAILED	DRAWING	3					
1	ROOF	13							
2	WINDOW + SILL	8½							
3	FOUNDATIONS + WALLS + SLAB	10½							
4	HATCHING	5							
5	URINAL + LABELS	5							
	SUBTOTAL	42							
	PENALTIES	S (-)							
	TOTAL	92							
	E	XAMINATIO	N NUMBER						
l .									

EXAMINATION NUMBER

6

DETAILED SECTION SCALE 1:20 Engineering Graphics and Design/P1 NSC DBE/Feb. - Mar. 2014



QUESTION 4: CIVIL DRAWING

Given:

- The incomplete north elevation of a new house, showing the walls, the entrance opening, the roof and notes
- The incomplete floor plan, showing the walls, position of the doors, windows, fixtures and the electrical fittings
- Roof notes and a schematic diagram of a roof truss
- The floor finishes and a diagram showing the room designations
- The incomplete foundation, wall detail of an internal and an external wall
- A table of roof components
- A table of electrical symbols
- A window and door schedule
- A table of fixtures
- The incomplete floor plan of the new house, drawn to scale 1:50, on page 6

Instructions:

- Answer this question on page 6.
- Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new house:
- 4.1 The complete floor plan
- 4.2 The north elevation
- **4.3 A sectional elevation** on cutting plane A-A
- ALL drawings must comply with the guidelines and graphical symbols contained in the SANS 10143.

SPECIFICATIONS:

THE FLOOR PLAN

Add the following features to the drawing:

- ALL the doors and windows
- ALL the fixtures as indicated by the abbreviations
- ALL the electrical fittings as indicated by the numbers
- ALL hatching detail

THE NORTH ELEVATION

Show the following features on the drawing:

- The outside walls and the finished floor level
- The double doors and step
- The roof detail, including the barge boards and fascia board

THE SECTIONAL ELEVATION

Show the following features on the drawing:

- The complete foundation, wall, slab, roof and ceiling detail
- The window detail, with a double lintel
- The detail of the window on the east-facing wall
- ALL hatching detail

Label the following:

- The room designations with floor finishes
- The north elevation and the sectional elevation
- Using the correct abbreviations, label the following features in the correct view: natural ground level, finished floor level and damp-proof course

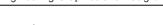
NOTE:

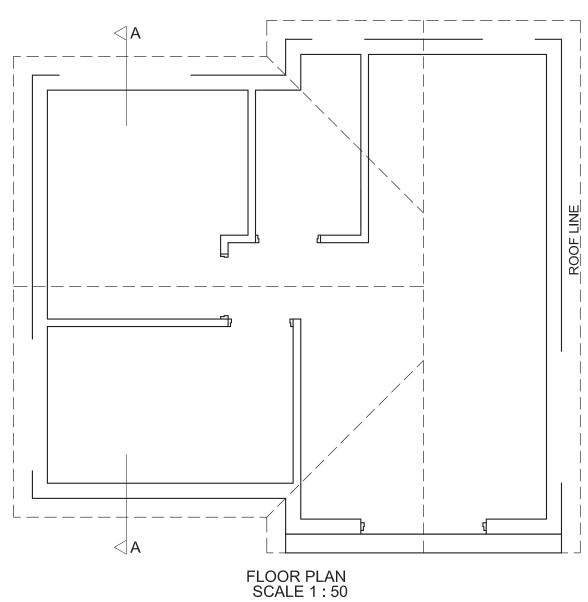
ALL substructure hatching may be drawn in freehand. [96]

TRUSS FOR ROOF A

TO FIT

BUILT-IN CUPBOARD (BIC)

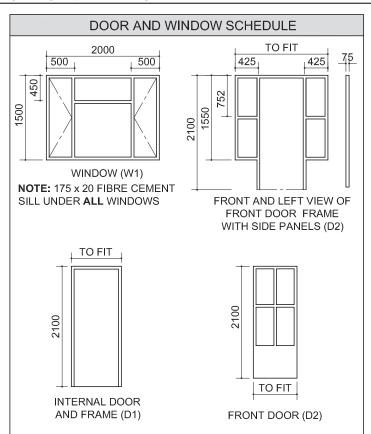




LABELS ELECTRICAL FIXTURES	FLOOR POSSIBLE 5	PLAN OBTAINED	SIGN	
ELECTRICAL	5	OBTAINED	SIGN	
ELECTRICAL				MODERATE
FIXTURES	11			
INTOILE	11			
DOORS + WINDOWS	15			
HATCHING	3			
UBTOTAL	45			
N	ORTH EL	EVATION	I	
WALLS + FFL + STEP	3			
ROOF + FACIA GUTTER + RWDP	6½			
DOOR	2			
LABELS	11/2			
UBTOTAL	13			
SEC	TIONAL	ELEVATI	ON	
ROOF	12			
WALLS + FLOOR + FOUNDATION	11½			
WINDOWS	7			
HATCHING	5			
LABELS	21/2			
UBTOTAL	38			
TOTAL	96			
	HATCHING WALLS + FFL + STEP ROOF + FACIA GUTTER + RWDP DOOR LABELS UBTOTAL SEC ROOF WALLS + FLOOR + FOUNDATION WINDOWS HATCHING LABELS UBTOTAL TOTAL	### WINDOWS ### HATCHING ### ATCHING ###	NORTH ELEVATION	### ATCHING 3 3 3 3 3 3 3 3 3

EXAMINATION NUMBER

Engineering Graphics and Design/P1 NSC DBE/November 2013



W1

WC

WB

BIC

NOTE:

TOILET

ELECTRICAL FITTINGS 1. SINGLE-POLE LIGHT SWITCH

2. CEILING LIGHT

ROOF NOTES:

SPACED

WASHBASIN

BUILT-IN CUPBOARD

3. 2 x 40 W FLUORESCENT TUBES

THE ARROW SHOWS THE LIGHT

114 x 38 mm ROOF TRUSSES ON 114 x 38 mm WALL PLATES

ROOF PITCH 20° WITH 200 x 20 mm FASCIA BOARD ON BOTH ENDS

125 x 100 mm GUTTER ON BOTH ENDS

PLASTER CEILING BOARD ON 6 STRIPS OF 38 x 38 mm BRANDERING, EVENLY

AND EXTERNAL WALL DETAIL

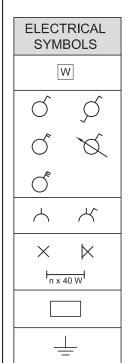
ROOF COVER 15 mm CORRUGATED

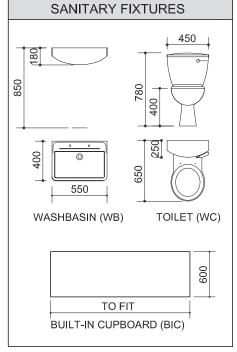
IRON ON 75 x 50 mm PURLINS @ 1800 c/c

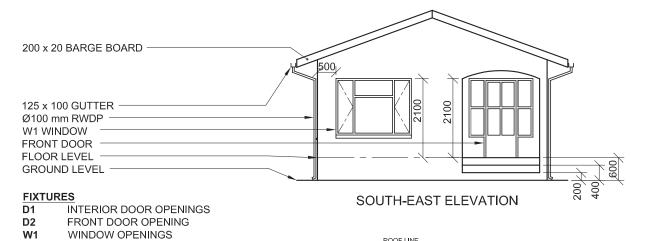
CONNECTION TO THE SWITCH.

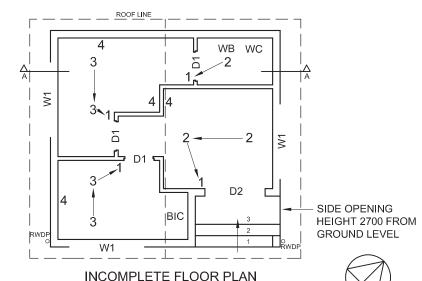
4. SWITCH SOCKET OUTLET

ROOF COMPONENTS				
75 x 50 PURLINS				
200 x 20 FASCIA BOARD				
114 x 38 WALL PLATE				
125 x 100 GUTTER				
ROOF CAP	300			

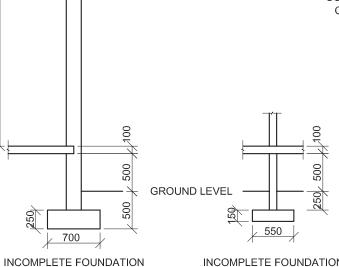








SCHEMATIC DIAGRAM OF A ROOF TRUSS



INCOMPLETE FOUNDATION AND INTERNAL WALL DETAIL

TOILET ROOM 1 RECEPTION ROOM 2

RECEPTION: WOOD

FLOOR FINISH

CARPET CARPET

WOOD

ROOM 1:

ROOM 2:

TOILET:

ROOM DESIGNATIONS WITH FLOOR FINISHES

QUESTION 4: CIVIL DRAWING

Given:

- The complete south-east elevation of new consulting rooms, showing the walls, the window, the front door, the roof and notes
- The incomplete floor plan, showing the walls, position of the windows, doors, fixtures and the electrical fittings
- Roof notes and a schematic diagram of a roof truss
- Incomplete foundation and wall detail
- The floor finishes and a diagram showing the room designations
- A door and window schedule
- A table of roof components
- A table of electrical symbols
- A table of sanitary fixtures
- The incomplete floor plan of the new consulting rooms, drawn to scale 1:50, on page 6

Instructions:

- Answer this question on page 6.
- Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new **consulting rooms**:
- 4.1 The complete floor plan
- 4.2 A sectional elevation on cutting plane A-A
- 4.3 The north-east elevation
- ALL drawings must comply with the guidelines and graphical symbols contained in the SANS 10143.

SPECIFICATIONS:

THE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- ALL the sanitary fixtures as indicated by the abbreviations
- ALL the electrical fittings as indicated by the numbers
- ALL hatching detail

THE SECTIONAL ELEVATION

Show the following features on the drawing:

- The complete foundation, wall, slab, roof and ceiling detail
- The window detail, with a double lintel, and the door detail
- The sanitary fixtures
- ALL hatching detail

THE NORTH-EAST ELEVATION

Show the following features on the drawing:

- The outside walls and finished floor level
- The roof detail, including the gutter, fascia board and rain-water downpipe
- The window detail

Label the following:

- The room designations with floor finishes
- The sectional elevation and north-east elevation
- Using the correct abbreviations, label the following features in the correct view: ground level and damp-proof course.

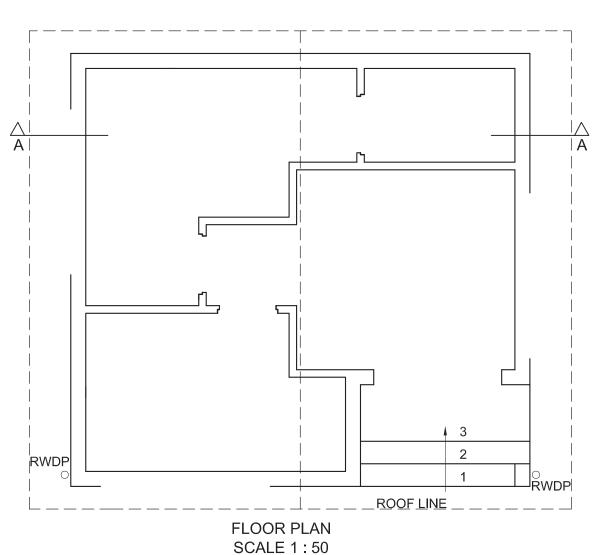
NOTE:

• ALL substructure hatching may be drawn in freehand. [96]

Please turn over



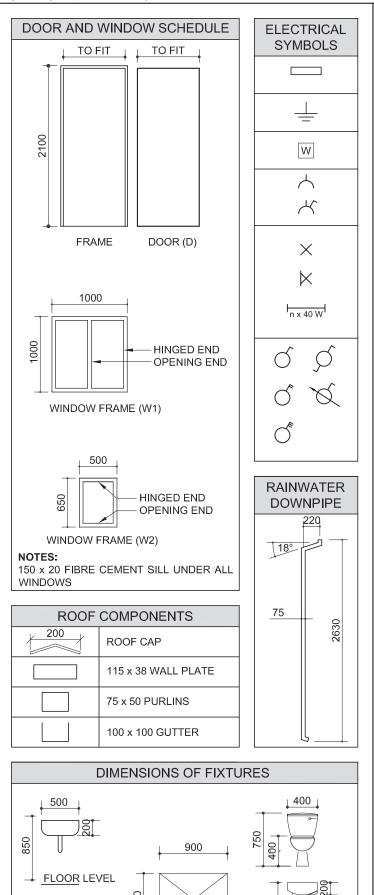




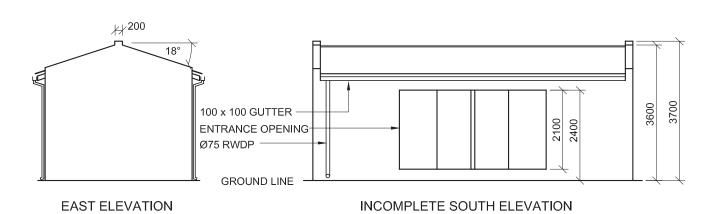
		FLOOR	PLAN		
		POSSIBLE	OBTAINED	SIGN	MODERATE
1	LABELS	4			
2	ELECTRICAL	11			
3	FITTINGS	6			
4	DOORS + WINDOWS	14			
5	HATCHING	3			
S	SUBTOTAL	38			
	SEC	TIONAL	ELEVATI	ON	
1	ROOF	16			
2	WALLS + FLOOR + FOUNDATIONS	11			
3	WINDOW	2			
4	LABELS	3			
5	HATCHING	6			
6	FIXTURES	4			
S	SUBTOTAL	42			
	NOR	TH-EAST	ELEVAT	ION	
1	WALLS + FFL	5			
2	ROOF + GUTTER + RWDP	5			
3	WINDOW	5			
4	LABELS	1			
S	SUBTOTAL	16			
	TOTAL	96			

EXAMINATION NUMBER

Engineering Graphics and Design/P1 NSC DBE/Feb. - Mar. 2013



WASH BASIN (WB) SHOWER DETAIL (SH) W.C. DETAIL (WC)



FEATURES D DOOR

W1 WINDOW W2 WINDOW

FIXTURES

WC - TOILET
SH - SHOWER
WB - WASH BASIN

ELECTRICAL FIXTURES

- 1. LIGHT SWITCH ONE-POLE 2. LIGHT SWITCH TWO-POLE
- 3. CEILING LIGHT
- 4. SWITCHED SOCKET OUTLET

ROOF NOTES:

ROOF PITCH 18°.

BOTH ENDS.

ROOF COVER 15 mm FIBRE

CEMENT SHEET ON 75 x 50 mm

115 x 38 mm ROOF TRUSS ON

100 mm SQUARE GUTTER ON

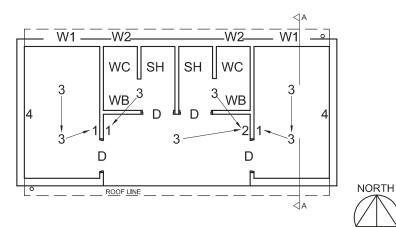
SCHEMATIC DIAGRAM

OF A ROOF TRUSS

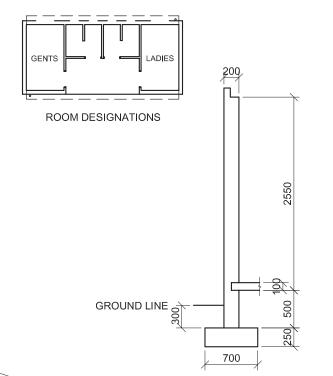
PURLINS @ 700 mm c/c.

115 x 38 mm WALL PLATE.

NOTE: THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH



INCOMPLETE FLOOR PLAN



INCOMPLETE FOUNDATION, SLAB AND WALL DETAIL ON A-A

QUESTION 4: CIVIL DRAWING

Given:

- The incomplete south elevation of a new *change room*, showing the walls, the enterance opening, the roof, dimensions and notes
- The incomplete floor plans showing the walls, position of the doors, the windows, the fixtures, the electrical features and room designations
- The complete east elevation
- Roof notes and a schematic diagram of a roof truss
- The incomplete foundation, slab and wall detail
- A door and window schedule
- A table of electrical symbols
- A table of roof components and the rainwater downpipe
- A table of fixtures
- The incomplete plan of the new *change room*, drawn to scale 1:50, on page 6

Instructions:

- Answer this question on page 6.
- Using the given incomplete floor plan, draw to scale 1:50 and in first-angle orthographic projection, the following views of the new *change room*:
- 4.1 The complete floor plan
- 4.2 The south elevation
- 4.3 A sectional elevation on cutting plane A-A
- ALL drawings must comply with the **guidelines** and **conventions** contained in the *SABS 0143*.

SPECIFICATIONS:

THE FLOOR PLAN

Add the following features to the drawing:

- ALL the doors and windows
- ALL fixtures as indicated by abbreviations
- ALL electrical features as indicated by numbers
- ALL hatching detail

THE SOUTH ELEVATION

Show the following features on the drawing:

- The outside walls
- The roof detail including the gutter and rainwaterdown pipe
- ALL visible detail through the front entrance opening with the internal doors open
- The finished floor level

THE SECTIONAL ELEVATION

Show the following features on the drawing:

- The complete foundation, wall, slab and roof detail
- The window detail with a double lintel above the window
- ALL features to the west of the cutting plane A-A
 - All batables detail
- ALL hatching detail

Label the following:

- The room designations and floor finish (tile)
- The south elevation and the sectional elevation
- Using correct abbreviations, label the following features in the correct view: ground level, finished floor level and damp-proof course.

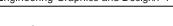
NOTE:

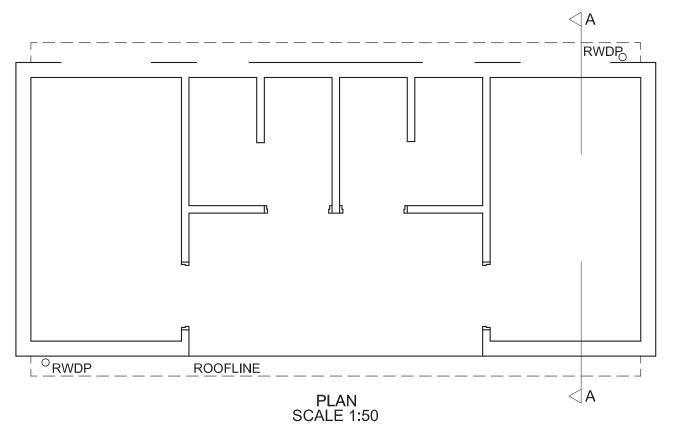
• ONLY the substructure hatching may be drawn in freehand. [94]



Please turn over

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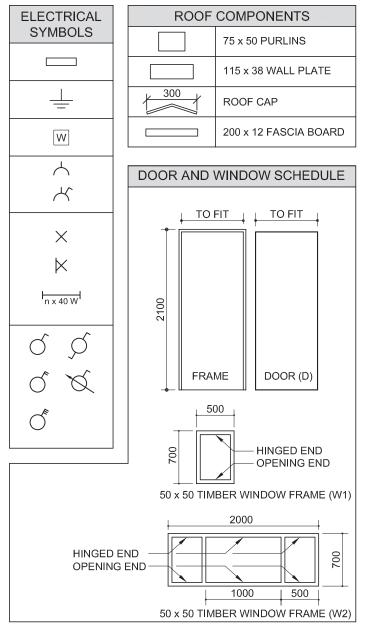


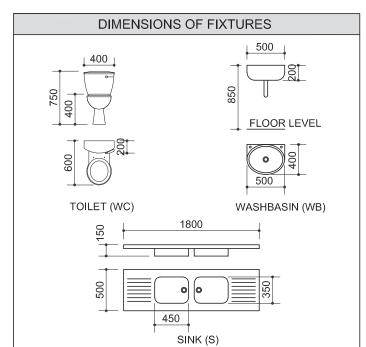


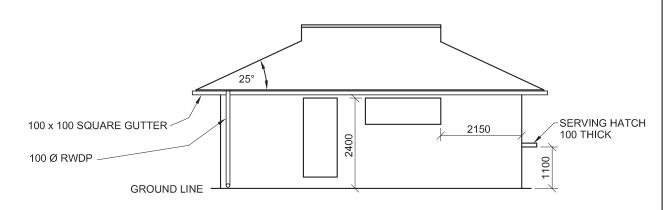
		PLA	AN AN		
		POSSIBLE	OBTAINED	SIGN	MODERAT
1	LABELS	2		7:::	
2		10			
<u> </u>	ELECTRICAL	.,			
3	FIXTURES	6			
4	DOORS + WINDOWS	14			
5	HATCHING	4			
	SUBTOTAL	36			
	S	OUTH EL	EVATION	1	
1	WALLS + FFL + DOOR + SH	11			
2	ROOF + GUTTER +RWDP	3			
3	LABELS	2			
	SUBTOTAL	16			
	SEC	TIONAL	ELEVATI	ON	•
1	ROOF	15			
2	WALLS + FLOOR + FOUNDATION	13			
3	WINDOW + DOOR+ FIXTUR's	5			
4	HATCHING	6			
5	LABELS	3			
	SUBTOTAL	42			
	TOTAL	94			
	IUIAI				

EXAMINATION NUMBER

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INCOMPLETE WEST ELEVATION

FEATURES

- DOOR - WINDOW W2 - WINDOW

FIXTURES

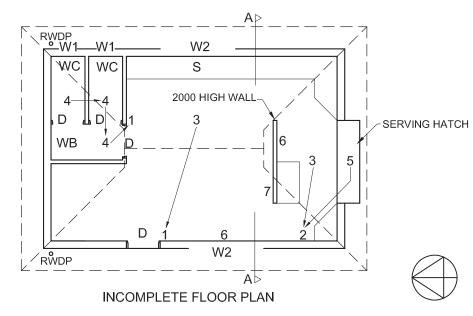
WC - TOILET S - SINK WB - WASHBASIN

ELECTRICAL FITTINGS

- 1. SINGLE-POLE LIGHT SWITCH
- 2. TWO-POLE LIGHT SWITCH
- 3. 3 x 40 W FLUORESCENT TUBES
- 4. CEILING LIGHT
- 5. OUTSIDE LIGHT
- 6. SWITCHED SOCKET OUTLET
- 7. DISTRIBUTION BOARD

NOTE:

THE ARROWS SHOW THE LIGHT CONNECTION TO THE SWITCH.



ROOF NOTES:

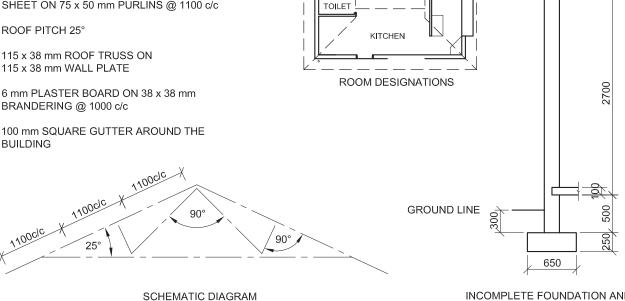
ROOF COVER 15 mm CORRUGATED IRON SHEET ON 75 x 50 mm PURLINS @ 1100 c/c

115 x 38 mm WALL PLATE

BRANDERING @ 1000 c/c

100 mm SQUARE GUTTER AROUND THE BUILDING

OF A ROOF TRUSS



INCOMPLETE FOUNDATION AND WALL DETAIL ON A-A

QUESTION 4: CIVIL DRAWING

Given:

- The incomplete west elevation of a new kitchen and tuck shop showing the walls, the position of the window, the door, the roof, dimensions and notes
- The incomplete floor plan showing the walls, position of the windows, doors, fixtures and electrical features
- Roof notes and a schematic diagram of a roof truss
- The incomplete foundation and wall detail on cutting plane A-A
- A table of electrical symbols
- A table of roof components
- A door and window schedule
- A table of fixtures
- The incomplete floor plan of the new kitchen and tuck **shop**, drawn to scale 1:50, on page 6

Instructions:

- Answer this question on page 6.
- Using the given incomplete floor plan, draw in first-angle orthographic projection and to scale 1:50, the following views of the new kitchen and tuck shop:
- 4.1 The complete floor plan
- **4.2 A sectional elevation** on cutting plane A-A

4.3 The west elevation

• ALL drawings must comply with the guidelines and **conventions** contained in the SABS 0143.

SPECIFICATIONS:

THE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows
- ALL fixtures as indicated by the abbreviations
- ALL electrical fittings as indicated by the numbers
- ALL hatching detail

THE WEST ELEVATION

Show the following features on the drawing:

- The outside walls
- The roof detail, including the gutter and rainwater downpipe
- The window and door detail
- The finished floor level

THE SECTIONAL ELEVATION

Show the following features on the drawing:

- The complete foundation, wall and roof detail
- The window detail with a double lintel above the window
- The internal wall to the south of cutting plane A-A ONLY
- ALL hatching detail

Label the following:

- The room designations and floor finish (tile)
- The west elevation and the sectional elevation
- Using correct abbreviations, label the following features in the correct view: ground level, finished floor level and damp-proof course.

NOTE:

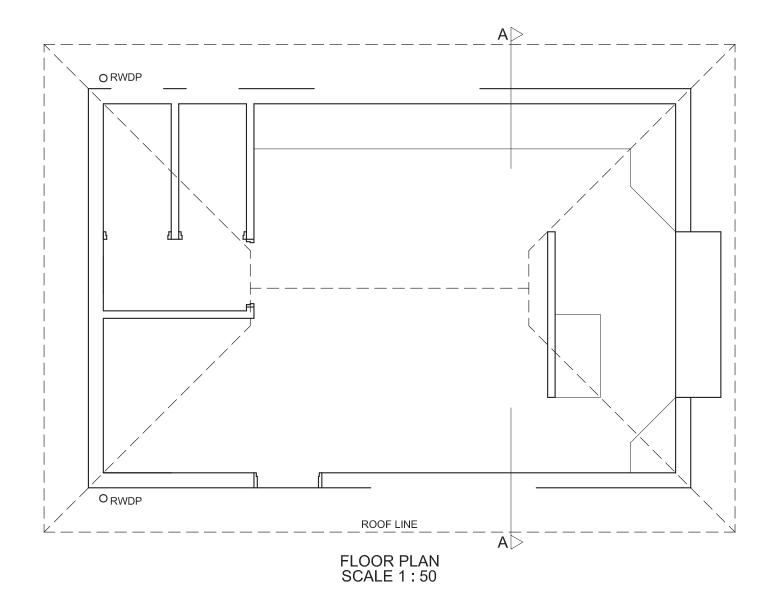
ONLY the substructure hatching may be drawn in freehand.

[94]





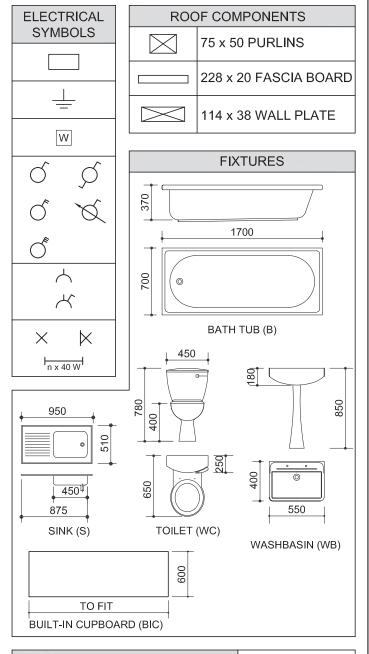
NGL ----

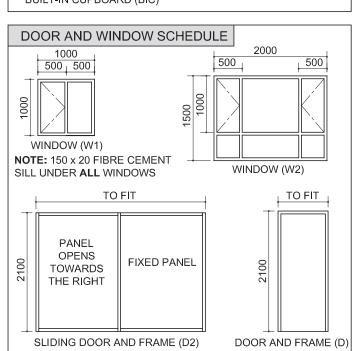


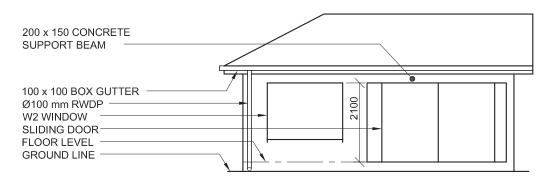
	ASS	ESSMEN	T CRITER	RIA	
		FLOOR	PLAN		
1	ELECTRICAL	9			
2	HATCHING	5			
3	DOORS + WINDOWS	14			
4	FIXTURES	4			
5	LABELS	2			
	SUBTOTAL	34			
	V	VEST ELE	EVATION		
1	WALLS + FFL + SERV' HATCH	3½			
2	ROOF + GUTTER +RWDP	7			
3	DOOR + WINDOW	6			
4	LABELS	1½			
	SUBTOTAL	18			
	SEC	TIONAL	ELEVATI	ON	
1	ROOF + CEILING	18			
2	WALLS + FLOOR + FOUNDATION	13			
3	WINDOW	3			
4	HATCHING	5			
5	LABELS	3			
	SUBTOTAL	42			
	TOTAL	94			
	EX	XAMINATIO	N NUMBER		
	EX	XAMINATIO	N NUMBER		6

DBE/November 2012

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INCOMPLETE NORTH-EAST ELEVATION

FIXTURES

HINGED DOOR OPENINGS SLIDING DOOR OPENING W1, W2 WINDOW OPENINGS

BATH SINK S WC **TOILET** WASHBASIN WB **BUILT-IN CUPBOARD**

ELECTRICAL FIXTURES

- 1. THREE-POLE LIGHT SWITCH 2. SINGLE-POLE LIGHT SWITCHES 3. CEILING LIGHT
- 4. 2 x 40 W FLUORESCENT TUBES 5. SWITCH SOCKET OUTLETS NOTE:

THE ARROW SHOWS THE LIGHT CONNECTION TO THE SWITCH.

ROOF NOTES:

ROOF COVER 15 mm CORRUGATED IRON ON 75 x 50 mm PURLINS @ 1450 c/c.

114 x 38 mm ROOF TRUSSES ON 114 x 38 mm WALL PLATES.

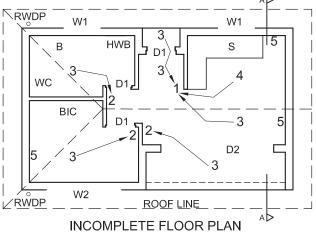
ROOF PITCH 30° WITH 228 x 20 mm FASCIA BOARD ON BOTH ENDS.

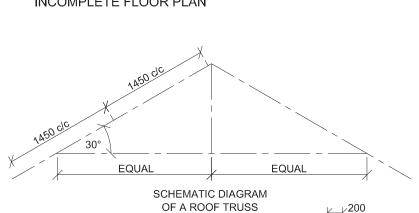
100 mm SQUARE BOX GUTTER

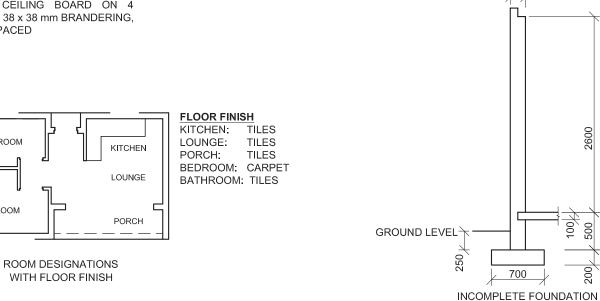
BATHROOM

BEDROOM

PLASTER CEILING BOARD ON 4 STRIPS OF 38 x 38 mm BRANDERING, **EVENLY SPACED**







QUESTION 4: CIVIL DRAWING

Given:

- The incomplete north-east elevation of a new cottage showing the walls, the position of the windows, sliding door, the roof and notes
- The incomplete floor plan showing the walls, position of the windows, doors, fixtures and the electrical fixtures
- Roof notes and a schematic diagram of a roof truss
- A diagram showing the room designations and floor finishes
- The incomplete foundation and wall detail
- A table of electrical symbols
- A table of roof components
- A table of fixtures
- A door and window schedule
- The incomplete floor plan of the new cottage, drawn to scale 1 : 50, on page 6

Instructions:

- Answer this question on page 6.
- Using the given incomplete floor plan, draw, to scale 1:50 and to the specifications, the following views of the new cottage:
- 4.1 The complete floor plan
- 4.2 The north-east elevation
- 4.3 A sectional elevation on cutting plane A-A
- ALL drawings must comply with the guidelines and conventions contained in the SABS 0143.

SPECIFICATIONS:

THE FLOOR PLAN

Add the following features to the drawing:

- ALL doors and windows. Show the direction of opening for the sliding door.
- ALL fixtures as indicated by the abbreviations
- ALL the electrical fixtures as indicated by the numbers
- ALL hatching detail

THE NORTH-EAST ELEVATION

Show the following features on the drawing:

- The outside walls
- The roof detail including the gutter, fascia board and rainwater downpipe
- The window and sliding door detail including all the directions of opening

THE SECTIONAL ELEVATION

Show the following features on the drawing:

- The complete foundation, wall, slab, roof and ceiling detail
- The sliding door detail
- ALL hatching detail

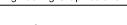
Label the following:

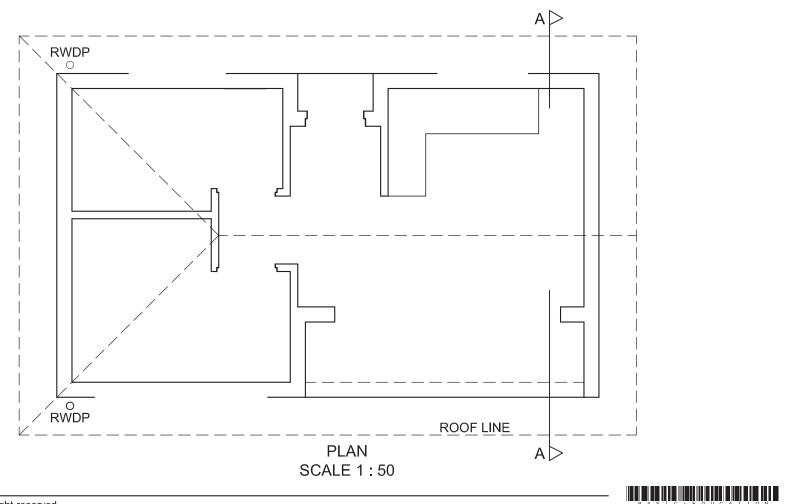
- The north-east elevation and the sectional elevation
- The room designations with floor finishes
- Using the correct abbreviations, label the following features in the correct view: ground level and damp-proof course.

NOTE:

AND WALL DETAIL

• ALL substructure hatching may be drawn in freehand. [96]

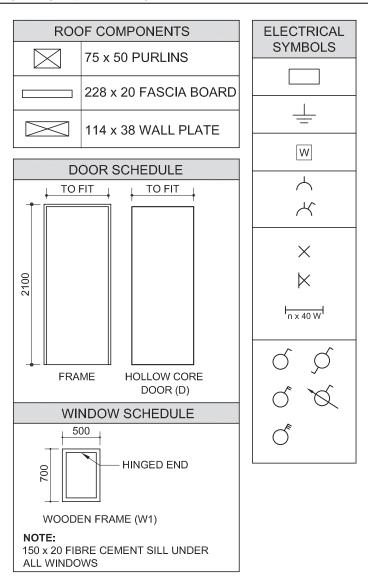


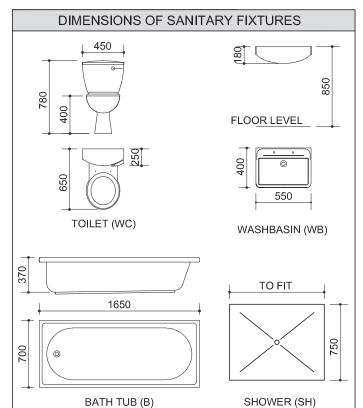


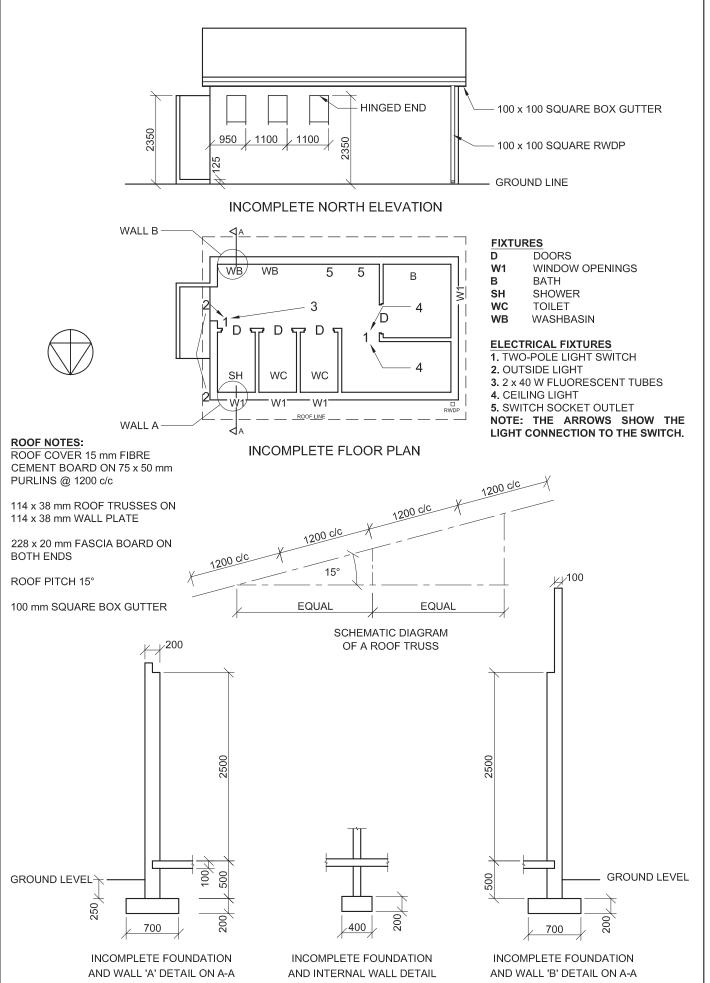
	A33	ESSMEN		KIA	
		FLOOR	PLAN		ı
1	LABELS	5			
2	ELECTRICAL	8			
3	FITTINGS	6			
4	DOORS + WINDOWS	12			
5	HATCHING	6			
	SUBTOTAL	37			
	NOR.	TH-EAST	ELEVAT	ION	
1	WALLS + FFL	4			
2	ROOF + GUTTER + RWDP	6 1			
3	WINDOWS + DOOR	9			
4	LABELS	1 1 2			
SUBTOTAL		21			
	SEC	TIONAL	ELEVATI	ON	
1	ROOF	13			
2	WALLS + FLOOR + FOUNDATIONS	15½			
3	SLIDING DOOR	1			
4	LABELS	1 1 2			
5	HATCHING	7			
	SUBTOTAL	38			
TOTAL		96			

EXAMINATION NUMBER

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QUESTION 4: CIVIL DRAWING

Given:

- The incomplete north elevation of a new ablution block for a campsite showing the walls, the position of the windows, the roof and notes
- The incomplete floor plan showing the walls, position of the windows, doors, sanitary fixtures and the electrical fixtures
- Roof notes and a schematic diagram of a roof truss
- The incomplete foundation and wall detail of wall 'A' and wall 'B' on cutting plane A-A
- A table of roof components
- A door and window schedule
- A table of electrical symbols
- A table of sanitary fixtures
- The incomplete floor plan of the new **ablution block**, drawn to scale 1:50, on page 6

Instructions:

- Answer this question on page 6.
- Using the given incomplete floor plan, draw, to scale 1:50 and to the specifications, the following views of the new ablution block:
- 4.1 The complete floor plan
- 4.2 The north elevation
- **4.3 A sectional elevation** on cutting plane A-A
- ALL drawings must comply with the guidelines and conventions contained in the SABS 0143.

SPECIFICATIONS:

THE FLOOR PLAN

Add the following features to the drawing:

- ALL the doors and windows
- The sanitary fixtures as indicated with the abbreviations
- ALL the electrical fixtures as indicated with the numbers

THE NORTH ELEVATION

Show the following features on the drawing:

- The outside walls
- The roof detail including the gutter, fascia board and rainwater downpipe
- The window detail
- The finished floor level

THE SECTIONAL ELEVATION

Show the following features on the drawing:

- The complete foundation, wall, slab and roof detail
- The window, with a single lintel, and door detail
- ALL features and fixtures on and to the east of cutting
- ALL hatching detail

Label the following:

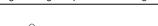
plane A-A

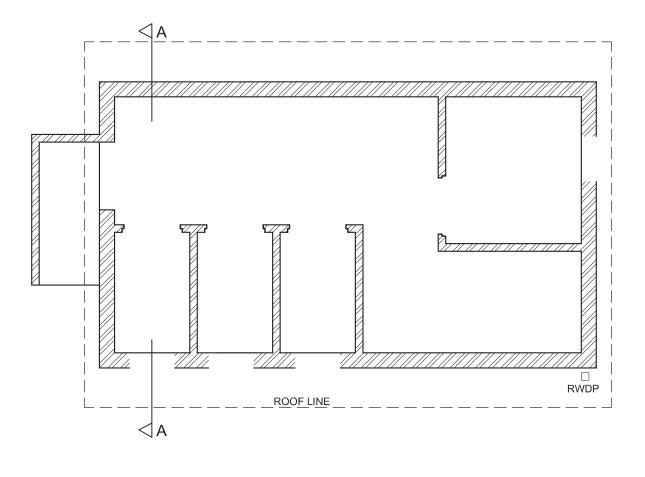
- The floor plan, including the scale
- The room designation and floor finish (ceramic tile)
- The north elevation and the sectional elevation
- Using the correct abbreviations, label the following features in the correct view: ground level, finished floor level and damp-proof course.

NOTE:

• ALL substructure hatching may be drawn in freehand. [95]

Please turn over



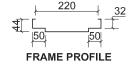


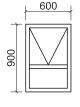
		FLOOR	PLAN		
1	LABELS	2			
2	ELECTRICAL	7			
3	FIXTURES	8			
4	DOORS + WINDOWS	14			
	SUBTOTAL	31			
	NC	RTH EL	EVATIC	N	
1	WALLS + FFL	4			
2	ROOF + FACIA + GUTTER + RWDP	5			
3	WINDOWS	10½			
4	LABELS	11/2			
	SUBTOTAL	21			
	SEC	ΓΙΟΝΑL	ELEVA	TION	
1	ROOF	11			
2	WALLS + FLOOR + FOUNDATION	14½			
3	WINDOW + DOORS + FIXTURES	8			
4	HATCHING	7			
5	LABELS	21/2			
	SUBTOTAL	43			
	TOTAL	95			

EXAMINATION NUMBER

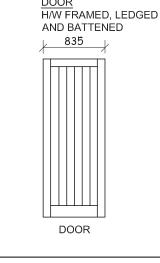
Engineering Graphics and Design/P1 NSC DBE/Feb. - Mar. 2011

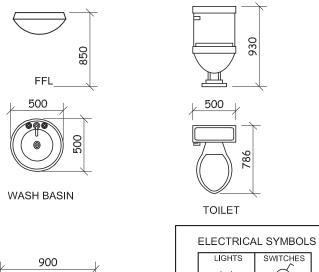
DOOR AND WINDOW SCHEDULE DOOR FRAME STANDARD, EXTERNAL, MILD STEEL WINDOW STANDARD W0609 TIMBER FRAME

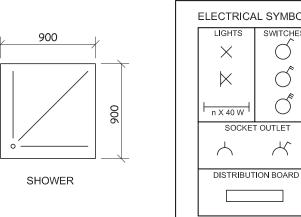


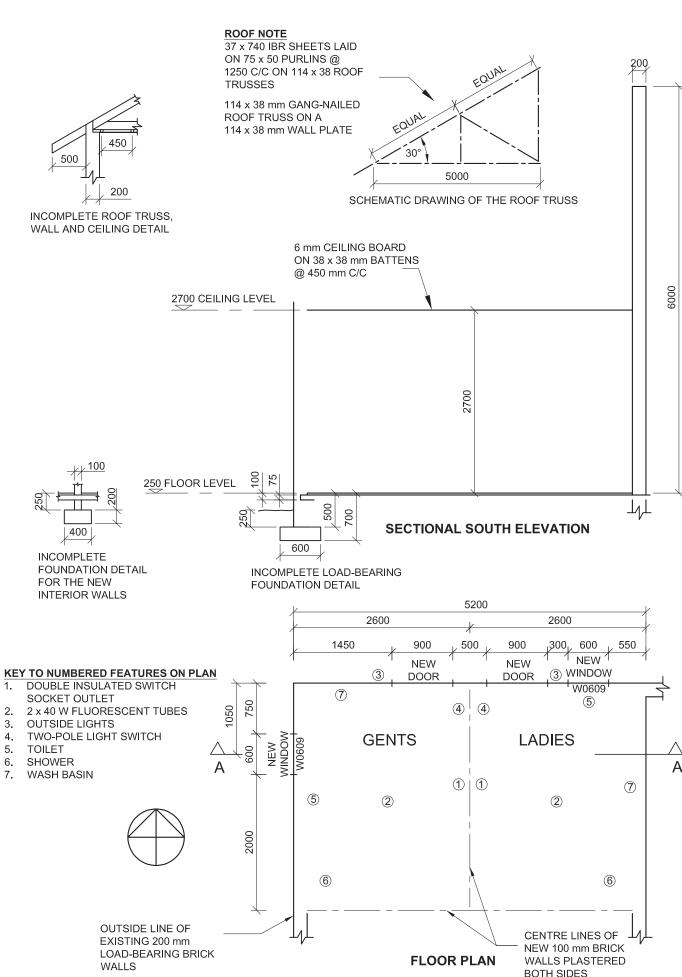


900 900 FRAME









QUESTION 4: CIVIL DRAWING

Giver

- The incomplete sectional south elevation of a part of an previous extention to a clubhouse showing the outside line of the existing outer wall, the incomplete load-bearing foundation detail, the ceiling level and an existing 200 mm load-bearing wall
- The incomplete floor plan of proposed new ladies and gents change rooms, that will be developed inside the given part of the previous extention, showing the outside lines of the exterior walls, the centre lines of the new interior walls, the position of all the fixtures and features, relevant notes and dimensions
- A door and window schedule
- The fixtures for the change rooms
- A table of electrical symbols
- The incomplete roof truss, wall and ceiling detail
- A schematic drawing of the roof truss, drawn to a different scale
- The incomplete foundation detail for the new interior walls

Instructions:

- Answer this question on page 6.
- Draw, to scale 1: 50 and to the given specifications, the following views of the proposed new ladies and gents change rooms:
- 4.1 The complete floor plan
- **4.2 The complete sectional south elevation** on cutting plane A-A
- ALL drawings must comply with the guidelines contained in the SABS 0143.

SPECIFICATIONS:

THE FLOOR PLAN

Show the following features on the drawing:

- ALL the walls with hatching detail
- ALL the doors and windows
- The conventions of ALL the fixtures as indicated with the numbers
- ALL the electrical features as indicated with the numbers.
 Each change room's outside light and florescent tubes must be connected to the two-pole light switch.
- The cutting plane A-A

THE SECTIONAL SOUTH ELEVATION

Show the following features on the drawing:

- The complete foundation, floor, wall, window, ceiling and roof detail. The window must have two lintels.
- The doors and window to the north of cutting plane A-A
- The conventions of the fixtures to the north of cutting plane A-A
- ALL hatching detail

Label the following:

- The floor plan, including the scale
- The sectional south elevation
- The change rooms and floor finish (ceramic tiles)

NOTE

ALL substructure hatching may be drawn in freehand

[**97**]

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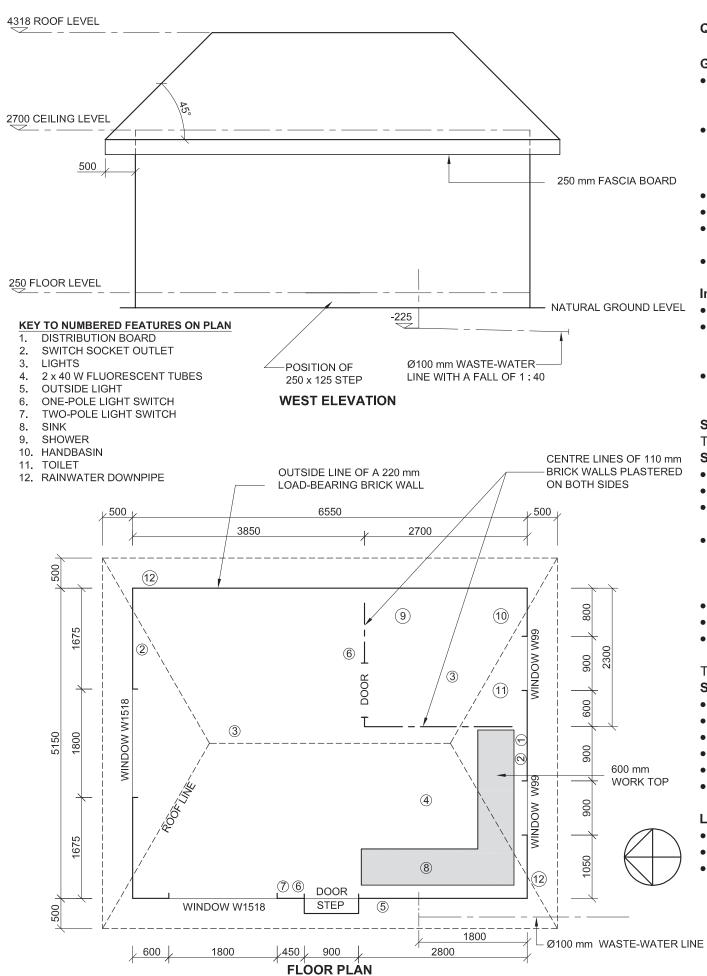
ASSESSMENT CRITERIA							
SECTIONAL SOUTH ELEVATION							
	POSSIBLE	OBTAINED	SIGN	MODERATE			
1. WALLS + HATCHING	16						
2. WINDOWS + DOORS	10						
3. FIXTURES	5						
4. ROOF + CEILING	15						
5. LABELS	1						
SUBTOTAL	47						
FL	OOR PL	.AN					
1. WALLS + HATCHING	12						
2. WINDOWS + DOORS	9						
3. FEATURES	11						
4. ELECTRIC	10						
5. LABELS	6						
6. CUTTING PLANE A-A	2						
SUBTOTAL	50						
TOTAL	97						

EXAMINATION NUMBER 6

EXAMINATION NUMBER

Engineering Graphics and Design/P1 NSC DBE/November 2010

DOOR AND WINDOW SCHEDULE 1800 500 800 500 WINDOW W99 MERANTI WINDOW GLASS W1518 3 mm CLEAR GLASS MERANTI GLASS 3 mm CLEAR GLASS 900 815 2100 48 DOOR FRAME **DOOR** EXTERIOR MERANTI 76 x 44 mm MERANTI 100 **ELECTRICAL SYMBOLS** LIGHTS SWITCHES n X 40 W □75 SOCKET OUTLET DISTRIBUTION BOARD **GUTTER AND RAINWATER** DOWNPIPE DETAIL 1200 500 | SINK DETAIL



QUESTION 4: CIVIL DRAWING

Given:

- The incomplete west elevation of a new **granny flat** showing the outlines of the walls and roof, as well as the position of the kitchen's waste-water disposal system
- The incomplete floor plan of the new **granny flat** showing the outside lines of the exterior walls, the centre lines of the interior walls, the position of all the features, relevant notes and dimensions
- A door and window schedule
- A table of electrical symbols
- A detailed drawing of the gutter and the rainwater downpipe
- A detailed drawing of the sink

Instructions:

- Answer this question on page 6.
- Draw, to scale 1 : 50 and the given specifications:

4.1 The complete floor plan

4.2 The complete west elevation

 ALL drawings must comply with the guidelines contained in the SABS 0143.

SPECIFICATIONS:

THE FLOOR PLAN

Show the following features on the drawing:

- ALL the walls with hatching detail
- The doors, step and windows
- The conventions of ALL the bathroom fixtures as indicated with numbers on the incomplete floor plan
- ALL the electrical features as indicated with numbers on the incomplete floor plan. The light in the living area and the fluorescent tubes in the kitchen must be connected to the two-pole light switch.
- The work top and the sink detail
- The waste-water disposal system for the kitchen
- The roof line

THE WEST ELEVATION

Show the following features on the drawing:

- The outlines of the walls and roof
- The door, step and window
- The finished floor level
- The gutter
- Rainwater downpipes
- The waste-water disposal system for the kitchen

Label the following:

- The floor plan, including the scale
- The west elevation
- Using the correct abbreviations, label the following features on the correct view: finished floor level, sink, the fall of the waste-water line, inspection eye, bathroom designation and floor finish (ceramic tiles).

Engineering Graphics and Design/P1 NSC DBE/November 2010



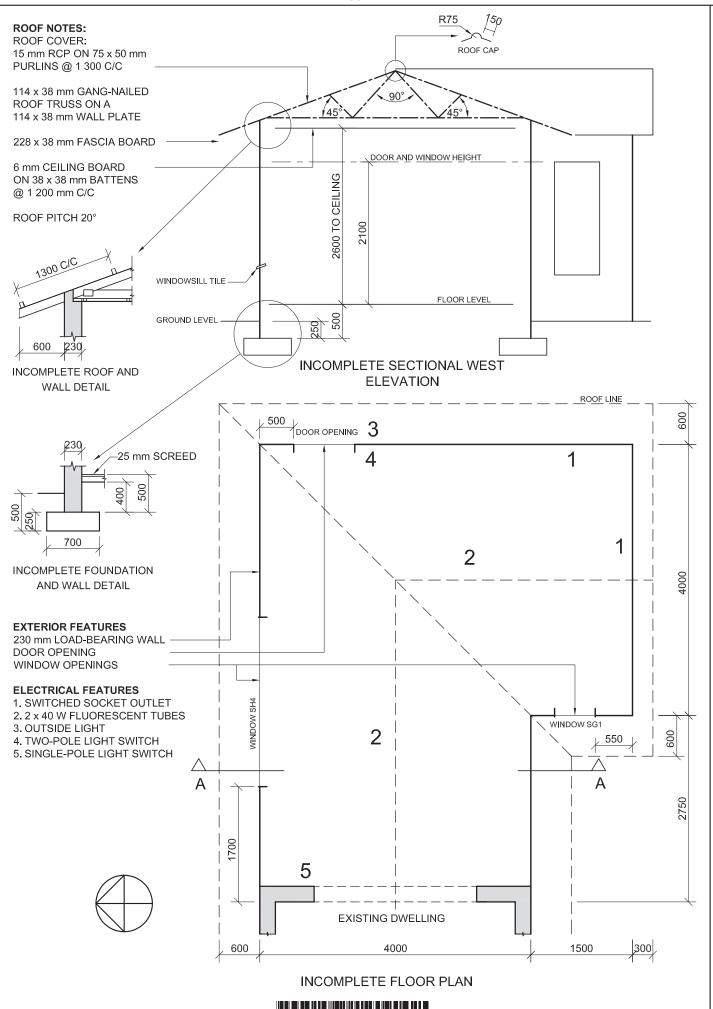
ASSESS	MENT (CRITERI	Α	
WEST	ΓELEV	ATION		
	POSSIBLE	OBTAINED	SIGN	MODERATE
1. ROOF + FASCIA	5			
2. GUTTER + RWDP	6			
3. WALLS + FFL	3 1 /2			
4. WINDOWS + DOOR + STEP	13½			
5. WASTE-WATER	2			
6. LABELS	4			
SUBTOTAL	34			
FL	OOR PL	-AN		
1. ROOF	4 1 /2			
2. WALLS	6 1			
3. WINDOW + DOOR + STEP	16			
4. KITCHEN + BATHROOM	11 1 /2			
5. ELECTRIC	12			
6. WASTE-WATER	2			
7. HATCHING	4 1 /2			
8. LABELS	6			
SUBTOTAL	63			
TOTAL	97			

EXAMINATION NUMBER 6

EXAMINATION NUMBER

Engineering Graphics and Design/P1 NSC DoE/Feb. - March 2010

DOOR AND WINDOW **SCHEDULE** 2500 600 HINGE SIDE HINGE SIDE WINDOW WINDOW MERANTI **MERANTI** GLASS GLASS 3 mm CLEAR GLASS 3 mm CLEAR GLASS DOOR FRAME DOOR DOOR FRAME DOOR EXTERIOR 230 x 44 mm MERANTI DOOR FRAME MERANTI DOOR FRAME **PROFILE ELECTRICAL SYMBOLS** SOCKET OUTLETS X \times 2 x 40 W



QUESTION 4: CIVIL DRAWING

Giver

- The incomplete sectional west elevation on cutting plane
 A-A of a new family room showing the outline of the walls and a schematic drawing of the roof truss
- The incomplete floor plan of the new *family room* showing the outline of the walls and the positions of all the features, notes and dimensions
- A door and window schedule
- A table of electrical symbols
- The incomplete roof and wall detail
- The incomplete foundation and wall detail
- The complete north elevation of the new *family room*, drawn to scale, on page 6

Instructions:

- Answer this question on page 6.
- Using the given north elevation as a guide, draw, to scale 1:50 and according to the given specifications:

4.1 The complete floor plan

- **4.2 The complete sectional west elevation** on cutting plane A-A
- ALL drawings must comply with the guidelines contained in the SABS 0143.

SPECIFICATIONS:

THE FLOOR PLAN

Show the following features on the drawing:

- ALL the walls with hatching detail
- The door and windows
- ALL the electrical features as indicated with numbers on the incomplete floor plan
- The roof line
- The cutting plane A-A

THE SECTIONAL WEST ELEVATION

Show the following features on the drawing:

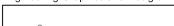
- The complete foundation, wall, slab and roof truss detail
- The door and window detail
- ALL hatching detail
- ALL other detail of the family room as seen from the west

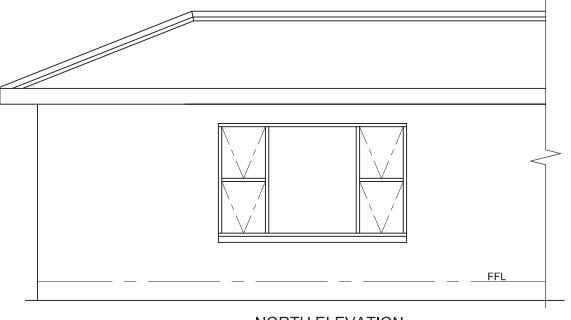
Label the following:

- The floor plan, including the scale
- The sectional elevation
- Using the correct abbreviations, label the following features on the correct view: natural ground level, damp-proof course, room designation (family room) and floor finish (ceramic tile)

NOTE

ALL substructure hatching may be drawn in freehand. [97]





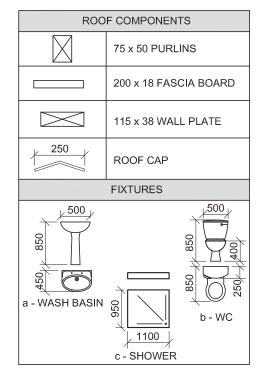
NORTH ELEVATION

	ASSESSMENT CRITERIA						
	SECTIO	NAL WE	ST ELEV	ATIO	N		
		POSSIBLE	OBTAINED	SIGN	MODERA	ATE	
1	ROOF + CEILING	24 ¹ / ₂					
2	WINDOW + DOOR	14					
4	WALLS + FLOOR + FOUNDATION	11½					
5	HATCHING	5½					
6	LABELS	3 <u>1</u>					
	SUBTOTAL	59					
		FLOOR	PLAN				
1	ROOF	4					
2	WINDOWS + DOOR	7					
3	WALLS	9					
4	ELECTRICAL	8 <u>1</u>					
5	HATCHING	3 <u>1</u>					
6	LABELS + A-A	6					
	SUBTOTAL	38					
	TOTAL	97					
	E.	XAMINATIO	N NUMBER				
						6	
	EXAMINATION NUMBER						

EXISTING DWELLING

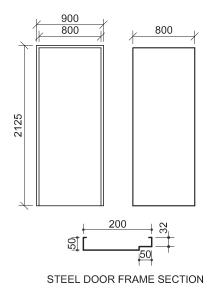
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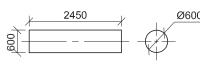
SCHEDULE OF COMPONENTS



DOOR SCHEDULE

1 x STANDARD-SIZED DOOR



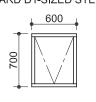


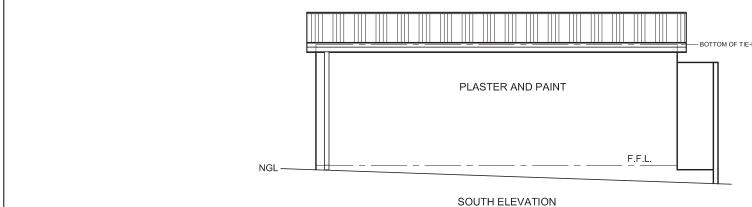
ROLL-UP GARAGE DOOR

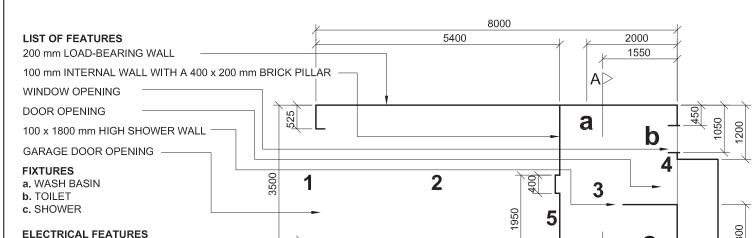
WINDOW SCHEDULE

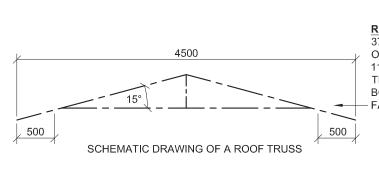
WINDOW

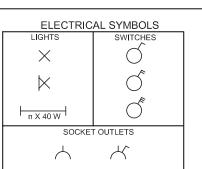
1 x STANDARD D1-SIZED STEEL FRAME











1. WALL-MOUNTED LIGHT 2.2 x 40 W FLUORESCENT TUBES

4. DOUBLE-POLE LIGHT SWITCH

5. SWITCH SOCKET OUTLET

3. CEILING LIGHT

ROOF NOTE 37 x 740 IBR SHEETS LAID ON 75 x 50 PURLINS @ 1100 C/C ON 115 x 38 ROOF TRUSSES WITH 100 x 100 BOX GUTTERS ON 200 x 18 **FASCIA BOARDS**

INCOMPLETE FLOOR PLAN

5

GROUND LINE 650 INCOMPLETE ROOF TRUSS, WALL

AND FOUNDATION DETAIL

1300

500

900

QUESTION 4: CIVIL DRAWING

Given:

- The complete south elevation of a proposed *free-standing* garage with a bathroom showing the walls and the visible
- An incomplete floor plan of the proposed free-standing garage with a bathroom showing the outline of the walls, the positions of all the features with notes and dimensions
- A schedule of the components
- A table with electrical symbols
- A schematic drawing of a roof truss
- The incomplete roof truss, wall and foundation detail
- The complete south elevation of the proposed new garage with bathroom, drawn to scale, on page 6

Instructions:

- Answer this question on page 6
- Using the given south elevation as a guide, draw, to scale 1:50 and according to the given specifications:
- 4.1 The complete floor plan
- 4.2 The complete sectional elevation on cutting plane
- ALL drawings must comply with the guidelines contained in the SABS 0143.

SPECIFICATIONS:

THE FLOOR PLAN

Show the following features on the drawing:

- · ALL the walls with hatching detail
- The bathroom door, garage door and the window
- ALL the electrical features as indicated with numbers on the incomplete floor plan
- ALL the sanitary fixtures as indicated with letters on the incomplete floor plan
- The cutting plane A-A

THE SECTIONAL ELEVATION

Show the following features on the drawing:

- The complete foundation, wall, slab and roof truss detail
- The door and window detail
- The WC and shower detail
- ALL hatching detail

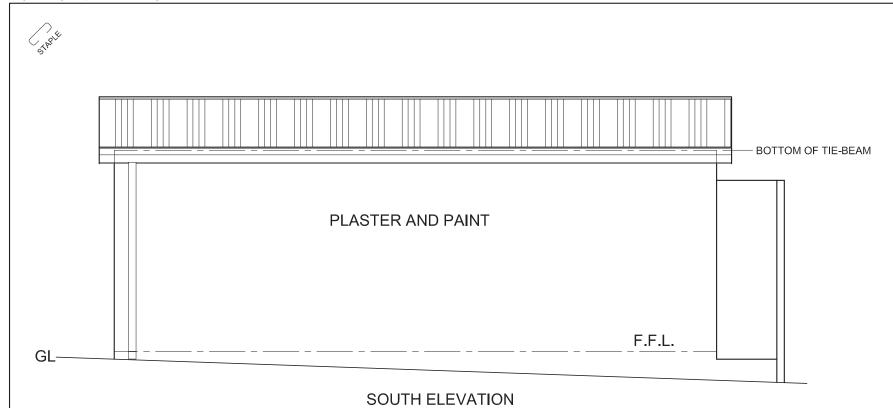
Label the following:

- The floor plan including the scale
- The sectional elevation
- Using the correct abbreviations, label the following features on the correct view: natural ground level, damp-proof course, room designations (garage and bathroom) and floor finishes (grano in the garage and ceramic tiles in the bathroom)

NOTE:

ALL substructure hatching may be drawn in freehand.

Please turn over

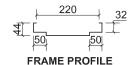


AS	SESSME	ENT CRI	TERI	4	
PLAN					
	POSSIBLE	OBTAINED	SIGN	MODERATE	
1 CORRECT SCALE	1				
2 WALLS + HATCHING	17 1 / ₂				
3 WINDOW + DOORS	7				
4 FIXTURES	5				
5 ELECTRICAL	10				
6 LABELS + C'PLANE	5				
,	SECTIONA	L ELEVA	TION		
1 CORRECT SCALE	1				
2 WALLS + FOUNDATION + HATCHING	19				
3 WINDOW + DOORS	8				
4 FIXTURES	3				
5 ROOF	10½				
6 LABELS	3				
TOTAL	90				
	EXAMINA	TION NUMBI	ER		
	EXAMINA	TION NUMBI	ER	16	

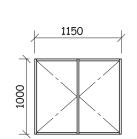
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FEATURE SCHEDULE





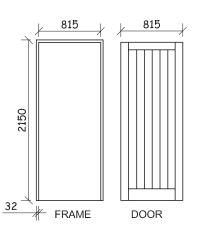
H/W FRAMED. LEDGED AND BATTENED

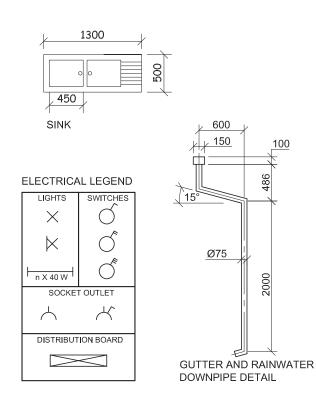


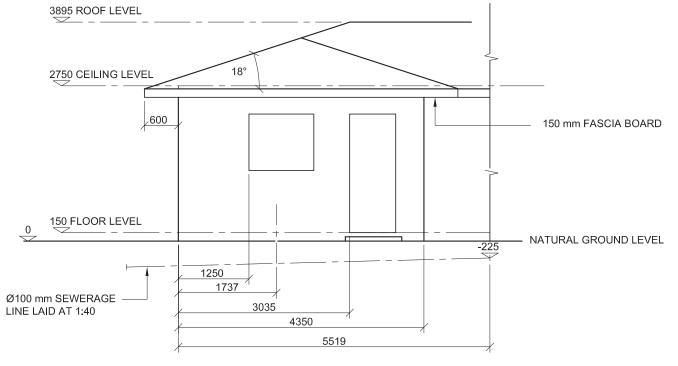
STANDARD C2 TIMBER

WINDOW

FRAME

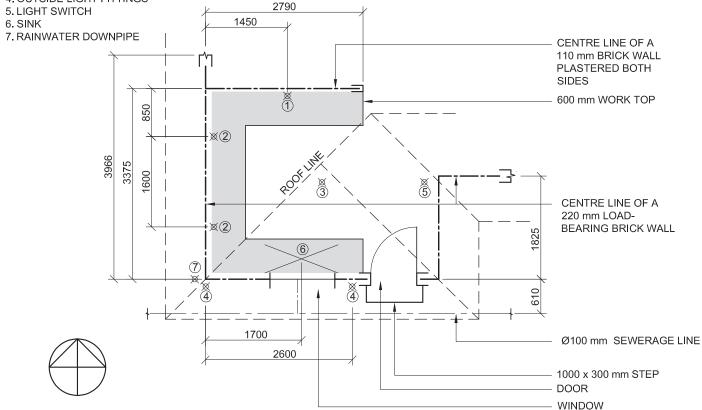






KEY TO NUMBERED FEATURES

- 1. DISTRIBUTION BOARD
- 2. SWITCHED SOCKET OUTLET
- 3. FLOURESCENT LIGHT FITTING
- (3 x 40 W TUBES)
- 4. OUTSIDE LIGHT FITTINGS
- 5. LIGHT SWITCH
- 6. SINK



QUESTION 4: CIVIL DRAWING

Given:

- A schematic floor plan of a *kitchen* showing the centre lines of the walls with dimensions, the positions of all the features and notes.
- The incomplete south elevation of the kitchen showing the outside lines of the walls and the positions of some of the features.
- · A schedule of features.
- A detailed drawing of the sink.
- A detailed drawing of the gutter and rainwater downpipe.
- A legend of electrical symbols.

Instructions:

- Answer this question on ANSWER SHEET 4 on page 6.
- Draw to scale 1:50 the complete floor plan and complete southern elevation of the kitchen to the given specifications.
- ALL drawing must comply with the guidelines contained in the SABS 0143.

SPECIFICATIONS:

THE FLOOR PLAN

Add the following features as indicated:

- ALL the walls with hatching detail
- The step
- The door and the window detail
- The distribution board
- ALL lights connected to ONE two pole light switch
- TWO outside lights and ONE flourescent light
- TWO switched socket outlets
- The work surfaces and the sink
- The waste-water disposal system (sewerage)
- The roof line

THE SOUTH ELEVATION

Add the following features as indicated:

- The complete wall and roof detail
- The step 75 mm high
- The door and complete window detail
- The autter
- Rainwater downpipe detail on the west side of the building ONLY
- The waste-water disposal system (sewerage)

Label the following:

- The floor plan and include the scale
- The elevation
- Using the correct abbreviations, label the following features on the correct view: natural ground level, finished floor level, rainwater downpipe (RWDP), sink, waste-water disposal system, inspection eye, room designation and floor finish (ceramic tiles). [97]

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ANSWER SHEET 4

ASSESSMENT CRITERIA				
ELEVATION	POSSIBLE	OBTAINED		
1 ROOF	4			
2 GUTTER / FACIA	7½			
3 WINDOW/DOOR	11			
4 WALLS/FFL/ STEP	8 1			
5 WASTE PIPES	3			
6 LABELS	6			
PLAN	POSSIBLE	OBTAINED		
1 ROOF	4			
2 ELECTRICAL	9			
3 WINDOW / DOOR	7 1 2			
4 WALLS / STEP	14			
5 WASTE PIPES / RWDP	5			
6 SINK/WORK AREA	6			
HATCHING	5 ¹ / ₂			
LABELS	6			

EXAMINATION NUMBER

6

EXAMINATION NUMBER

Engineering Graphics and Design/P1 NSC DoE/November 2008

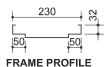


DOOR AND WINDOW SCHEDULE

PROPOSED NEW TV ROOM ON ERF 329 EAST LONDON

DRAWING NUMBER DOE 2-08 7 SIDE ROAD EAST LONDON 043 708 5555

DOOR FRAME STANDARD, EXTERNAL, MILD STEEL



DOOR H/W FRAMED, LEDGED AND BATTENED

IRONMONGERY
1 PAIR 75 mm BOLTS and HINGES
TWO-LEVER LOCKSET

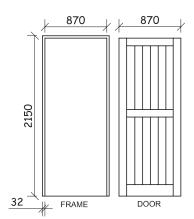
WINDOW STANDARD, MILD STEEL, ND 511

GLAZING
3 mm CLEAR GLASS

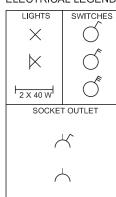
2000

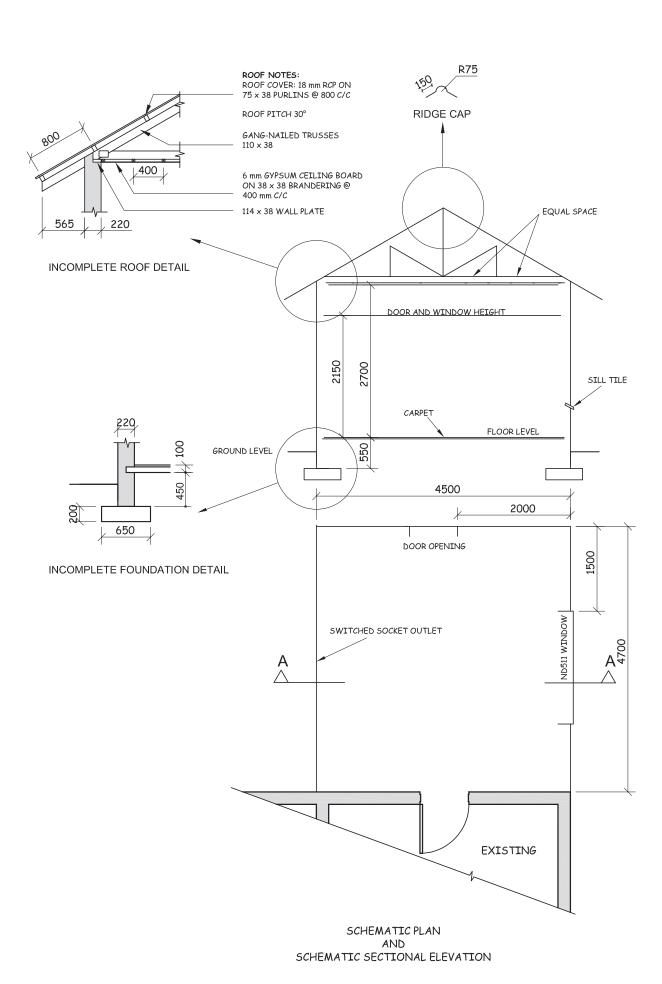
500

HINGED SIDE



ELECTRICAL LEGEND





QUESTION 4: CIVIL DRAWING

Given:

- A schematic floor plan and schematic sectional elevation
 of the outer perimeter of a proposed new TV room to
 an existing dwelling, and the position of all the features.
- A door and incomplete window schedule.
- Sketches of the roof and incomplete foundation detail.
- An electrical legend.

Instructions:

- Answer this question on ANSWER SHEET 4 on page 6.
- Draw, to scale 1:50, the complete floor plan and complete sectional elevation to the given specifications.
- Attach the drawing of the *proposed new TV room* to the given information on ANSWER SHEET 4.

SPECIFICATIONS:

THE FLOOR PLAN

Add the following features to the floor plan:

- ALL the walls with hatching detail
- The door and the window detail
- ONE light outside the room and near to the door and ONE light in the centre of the ceiling of the *proposed* new TV room
- A separate switch for each light
- ONE switched socket outlet in the middle of the indicated wall
- The cutting plane. Label the plane A-A.
- Label the floor plan and include the scale

A SECTIONAL ELEVATION

Add the following features to the sectional elevation:

- The complete foundation, wall, floor slab and roof detail
- The door and complete window detail
- ALL necessary hatching
- Label the sectional elevation: SECTIONAL ELEVATION A-A

NOTE:

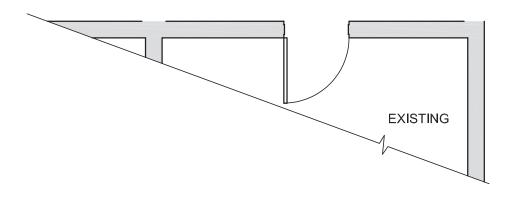
- Label ONLY the following features and on the correct view: natural ground level, damp proof course, proposed room designation and floor finish.
- ALL substructure hatching may be done in freehand.
- ALL drawing must comply with the guidelines contained in the SABS 0143.

TERMINOLOGY

Schematic diagram: a diagram that shows the main features or relationships but not the details.

Engineering Graphics and Design/P1 NSC DoE/November 2008

ANSWER SHEET 4 ASSESSMENT CRITERIA TOTAL POSSIBLE OBTAINED FLOOR PLAN 1 OUTLINE 2 WINDOW & DOOR 3 HATCHING 3 4 LIGHTS & SWITCH & SOCKET OUTLET 8 5 LABELS & CUTTING PLANE 8 6 JOIN SECTIONAL ELEVATION 7 FOUNDATION, SLAB & WALL 12 8 HATCHING 9 9 DOOR 3 7 10 WINDOW 11 ROOF TRUSS, CAP, GANGNAILS & COVER 17



EXAMINATION NUMBER

EXAMINATION NUMBER 6

12 CEILING, PURLINS & BRANDERING

13 LABELS

12 5

TOTAL 97

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DOOR SCHEDULE AND WINDOW SCHEDULE

PROPOSED NEW LAUNDRY ON STAND 354 MR K NAIDOC

DRAWING NUMBER

D&W 7 ZIBI ROAD DURBAN 031 708 5555

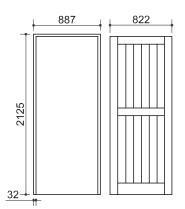
DOOR FRAME STANDARD, EXTERNAL, MILD STEEL



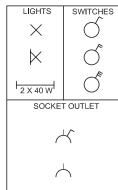
FRAME PROFILE

DOOR H/W FRAMED, LEDGED AND BATTENED

IRONMONGERY 1 PAIR 75 mm BOLTS, HINGES TWO-LEVER LOCKSET

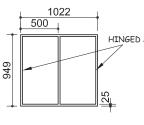


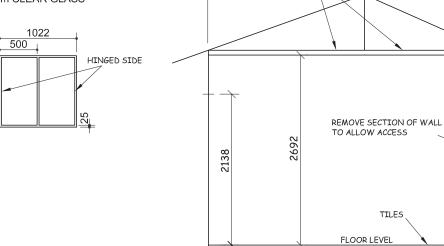
ELECTRICAL LEGEND



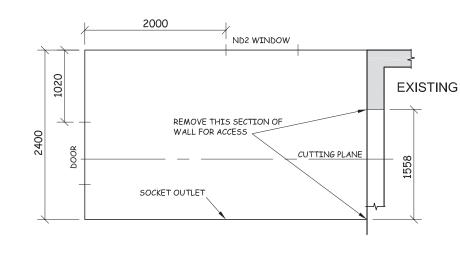
WINDOW STANDARD, MILD STEEL,

GLAZING 3 mm CLEAR GLASS





GROUND LEVEL



4000

EQUAL SPACE

SCHEMATIC PLAN AND SCHEMATIC SECTIONAL ELEVATION

QUESTION 4: CIVIL DRAWING

Given:

- A schematic floor plan and schematic elevation showing the outer perimeter of a proposed new laundry to an existing dwelling detailing the positions of all the features.
- A door and incomplete window schedule.
- · Sketches of the roof and incomplete foundation detail.
- An electrical legend.

Instructions:

- Answer this question on ANSWER SHEET 4 on page 5.
- Draw, to scale 1:40, the complete floor plan and complete sectional elevation to the given specifications.
- Attach the drawings of the proposed new laundry to the given information on ANSWER SHEET 4.

Specifications:

EXISTING

THE FLOOR PLAN

Add the following features to the floor plan:

- ALL the walls with hatching detail
- The door and the window detail
- The removed section of the wall of the existing dwelling
- ONE light outside the door and a single TWO, 40 watt fluorescent tube fitting in the centre of the ceiling of the laundry
- ONE switch for both lights
- ONE switched socket outlet in the middle of the indicated wall
- The cutting plane. Label the plane A-A
- Label the floor plan and include the scale

THE SECTIONAL ELEVATION

Add the following features to the sectional elevation:

- The complete foundation, wall, floor slab and roof detail
- The door and complete window detail
- The removed section of the wall of the existing dwelling
- ALL necessary hatching

600

INCOMPLETE FOUNDATION DETAIL

Label the sectional elevation: SECTIONAL ELEVATION ON A-A

Note:

GROUND LEVEL

- Label ONLY the following features on the correct view: natural ground level, damp proof course, window code, room designation and floor finish.
- ALL drawing must comply with the guidelines contained in the SABS 0143.

ROOF NOTES: ROOF COVER: 18 mm RCP ON 75 x 38 PURLINS @ 1175 C/C ROOF PITCH 20°

[95]



GANG-NAILED TRUSSES 400 6 mm GYPSUM CEILING BOARD ON 38 x 38 BRANDERING @ 500 400 mm C/C 242 114 × 38 WALL PLATE

INCOMPLETE ROOF DETAIL

PAGE 6

Engineering Graphics and Design/P1 DoE/Exemplar 2008 **ANSWER SHEET 4** ASSESSMENT CRITERIA TOTAL POSSIBLE OBTAINED FLOOR PLAN 1 OUTLINE 2 WINDOW & DOOR 3 HATCHING 4 LIGHTS & SWITCH & PLUG POINT EXISTING 5 LABELS AND CUTTING PLANE 6 REMOVED WALL 2 SECTIONAL ELEVATION 7 FOUNDATION 8 WALL & SLAB 8 9 HATCHING 13 10 DOOR & WINDOW 17 11 ROOF & CEILING 3 12 LABELS 3 13 REMOVED WALL TOTAL 95 **EXISTING EXAMINATION NUMBER EXAMINATION NUMBER**