

# HILLCREST HIGH SCHOOL

## NOVEMBER EXAMINATION

### ENGINEERING, GRAPHICS & DESIGN

GRADE 11  
2014  
PAPER 1

**MARKS: 100 TIME: 2 HOURS**

#### INSTRUCTIONS TO CANDIDATES

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

QUESTION	SECTION	MARK	MAXIMUM
1	CIVIL ANALYTICAL		20
2	PERSPECTIVE		50
3	CIVIL ASSEMBLY		100
TOTAL			170
SYMBOL			100

NAME

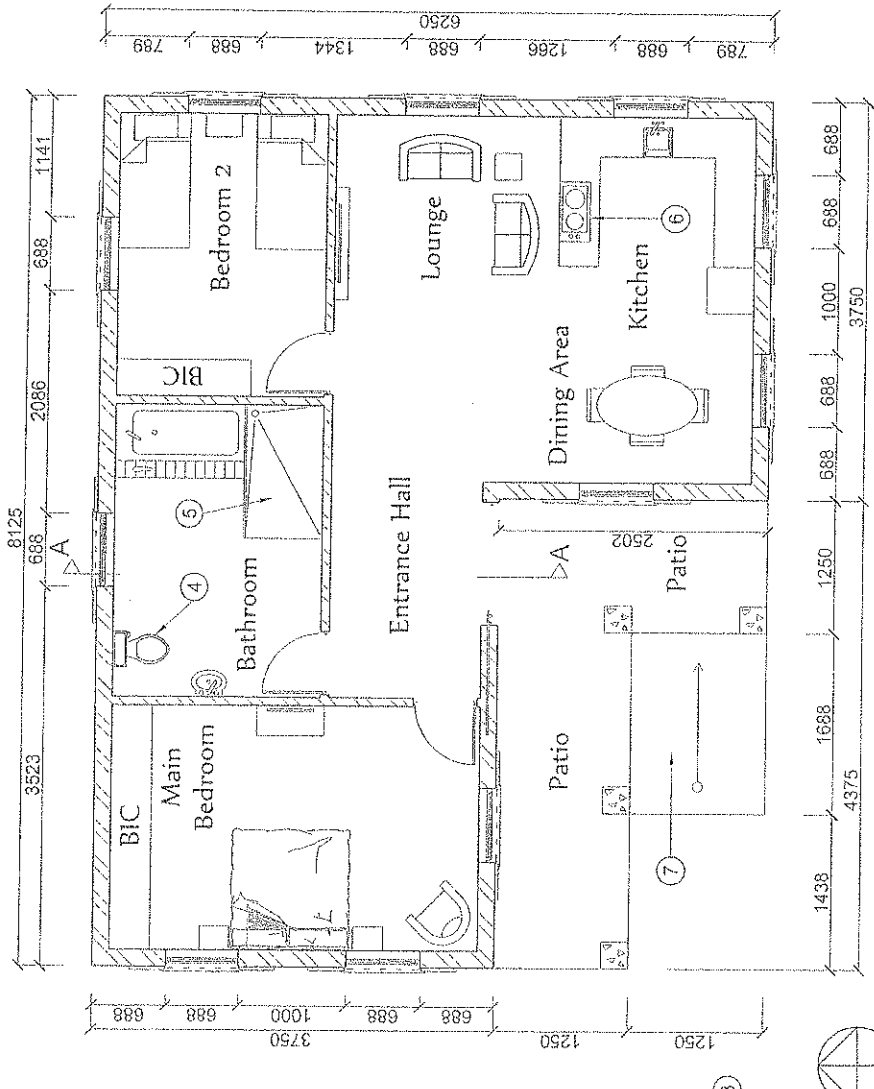
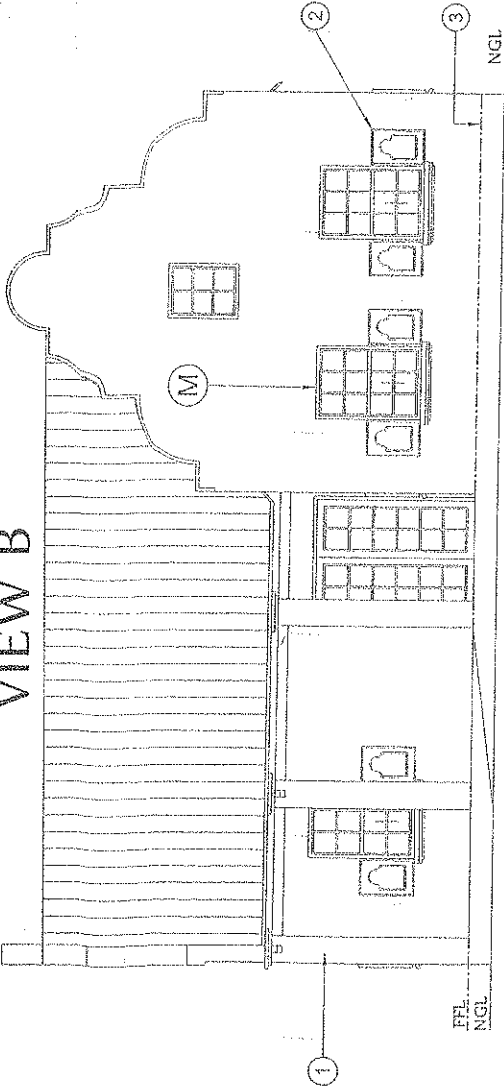
NOVEMBER 2014  
GRADE 11 PT  
QUESTION 1  
20 MARKS

CIVIL  
ANALYTICAL

STUDY THE DRAWING AND INFORMATION GIVEN, THEN ANSWER THE QUESTIONS BELOW:

- 1.1. What is the feature at 1 called?
- 1.2. What is the feature at 2 called?
- 1.3. What is the feature at 3 called? (no abbreviations)
- 1.4. What is the feature at 4 in the bathroom called?
- 1.5. What is the feature at 5 in the bathroom called?
- 1.6. What is the feature at 6 in the kitchen called?
- 1.7. What is the feature at 7 outside the patio called?
- 1.8. What is the feature at 8 called?
- 1.9. What elevation is shown by view B?
- 1.10. What is the most number of people that can sleep in this house?
- 1.11. How many people can have dinner at the dining table?
- 1.12. From what material is the feature at 1 made?
- 1.13. How many panes of glass are used in window M?
- 1.14. What is the width of window M?
- 1.15. How many windows are there on the eastern wall?
- 1.16. How many doors are there inside the house?
- 1.17. What style of house design was used for this dwelling?
- 1.18. What is the name of the cutting plane?
- 1.19. What is the distance between the windows on the northern wall?
- 1.20. How many windows are in the main bedroom?

VIEW B



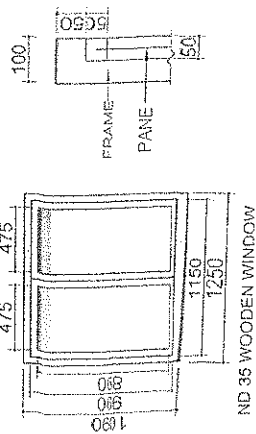
NAME

ANSWER SHEET 1

**PLUMBING FIXTURES**

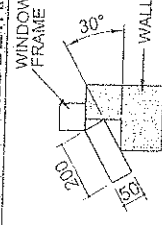
PLAN	FIXTURES
	ACRYLIC SHOWER BASE 800
	WATER CLOSET 500
	WASH BASIN 460
	KITCHEN SINK 450

**WINDOW 1 DETAIL**

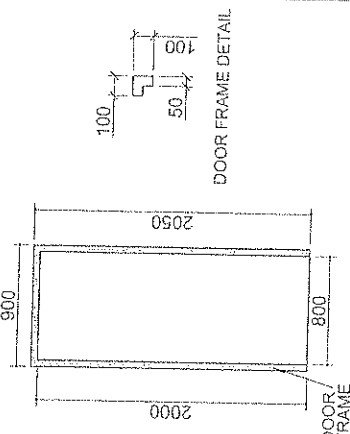


ND 35 WOODEN WINDOW

**WINDOW SILL DETAIL**

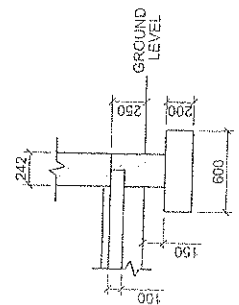


**DOOR DETAIL**

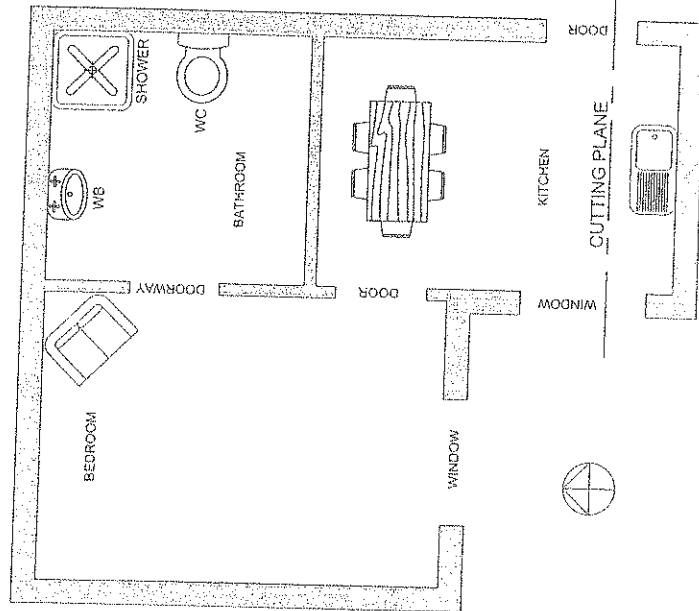
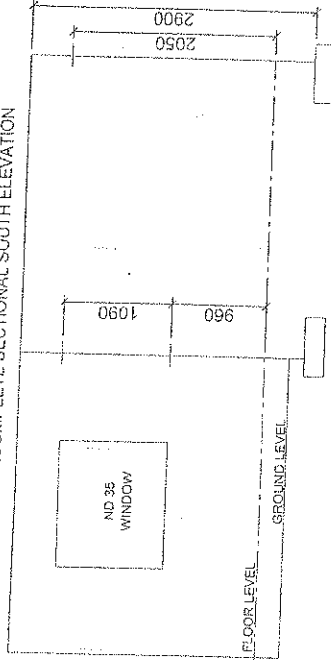


DOOR FRAME DETAIL

**FOUNDATION DETAIL**



**INCOMPLETE SECTIONAL SOUTH ELEVATION**



Details for a new **GRANNY COTTAGE** is as follows:

The following is given :

- A schematic floor plan:
- ▶ window position & door position
- ▶ perimeter dimensions & cutting plane A-A
- A schematic elevation:
- ▶ window position and door position
- ▶ ceiling height, ground level & floor level
- ▶ incomplete Foundation, Door and Window detail

Draw the following:

- The complete floor plan.
  - The complete sectional elevation. Also show the parts of the building that are not sectioned. Do not show the dining room table.
- Answer this question on the prepared answer sheet.
  - Use a scale of 1:50.
  - All drawings must comply with SABS 0:143

**FLOOR PLAN INSTRUCTIONS**

- Hatch all the walls.
- Draw all windows.
- Draw the external door and the door leading into the bedroom only. The bathroom does not have a door.
- Draw the wash basin, shower and water closet in the bathroom.
- Draw the single sink unit in the kitchen/dining room.
- Insert and label the cutting plane.
- Label the floor plan, print the scale.
- Print the room designation for the bedroom and bathroom.

**SECTIONAL SOUTH ELEVATION INSTRUCTIONS**

- Draw the complete foundation.
- Draw all floor slab details:
  - ▶ use 20mm screed
  - ▶ use 150mm compacted hardcore filling
- Label ground level and floor level.
- Label the damp proof course for the floor, window and door.
- Draw the sectional window with the brick window sill:
  - ▶ use ONE 242 X 100 concrete lintel above the window
  - ▶ use 200 X 50 concrete window sill
  - ▶ draw all window frame detail!
- Show the outside window, not in the sectioned area.
- Draw the sectioned door:
  - ▶ use ONE 242 X 100 concrete lintel above the door
  - ▶ Complete all hatch detail.
- Label the sectional elevation.

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QUESTION 3

100 MARKS

CIVIL  
ASSEMBLY

**ASSESSMENT CRITERIA**

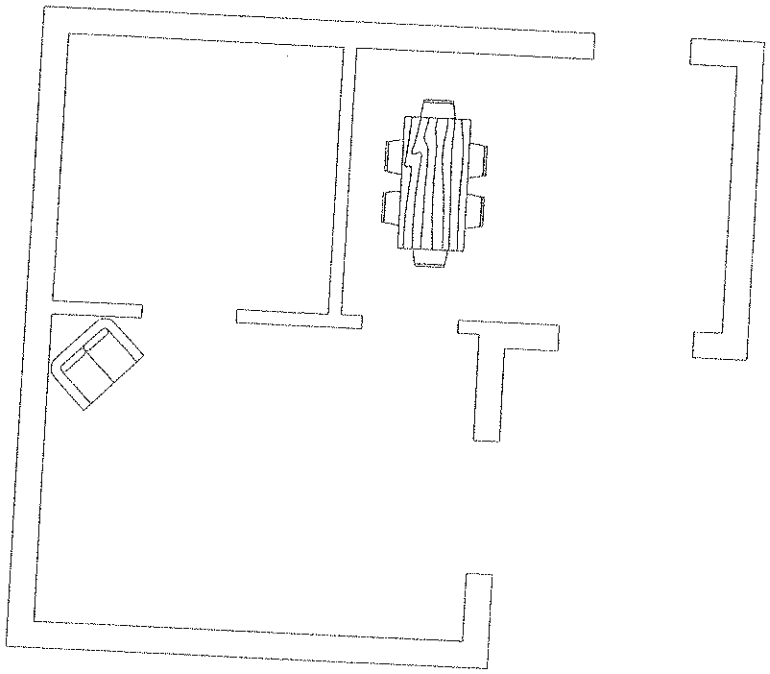
**SECTIONAL ELEVATION**

1	SECTIONED WALLS	8
2	OUTSIDE WALLS	3
3	SECTIONED WINDOW	6
4	OUTSIDE WINDOW	8
5	SECTIONED DOOR	7
6	FOUNDATION SLAB	7
7	DPC	3
8	LABELS	3
9	HATCHING	17

**FLOORPLAN**

10	WINDOWS	4
11	DOORS	8
12	BATHROOM FIXTURES	6
13	SINK UNIT	3
14	CUTTING PLANE	4
15	LABELS	4
16	HATCHING	9

<b>TOTAL</b>		<b>100</b>
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ANSWER SHEET 3

NAME