HILLCREST HIGH SCHOOL

NOVEMBER EXAMINATION

ENGINEERING, GRAPHICS & DESIGN

GRADE 10

2014

PAPER 1

MARKS: 100 **TIME**: 2 HOURS

INSTRUCTIONS TO CANDIDATES

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

QUESTION	SECTION	MARK	MODERATE	MAXIMUM
1	TRUE SHAPE & DEVELOPMENT			30
2	ONE POINT PERSPECTIVE			40
3	CIVIL DRAWING			30
TOTAL				100
SYMBOL				100

NAME

PLEASE TURN OVER

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QUESTION 1
30 MARKS

TRUE SHAPE

QUESTION 1

The figure shows the front view and incomplete top view of a right regular pentagonal pyramid.
The pyramid is cut by a cutting plane v-t.

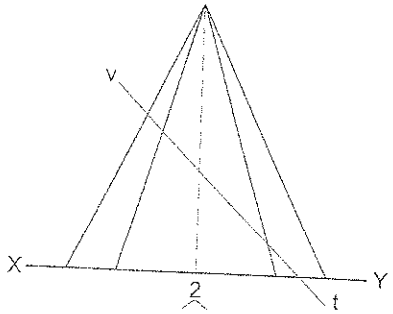
Draw the following:

1.1. the complete sectional top view;
1.2. the development - start with point 1 and continue numerically;
1.3. the true shape;
1.4. show all construction;
1.5. marks will be deducted for poor linework and untidy drawings.

ASSESSMENT CRITERIA

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

• draw the complete sectional top view	7
• draw the true shape	8
• draw the development of the pyramid	15
TOTAL	30



ANSWER SHEET 1

NAME

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QUESTION 2

40 MARKS

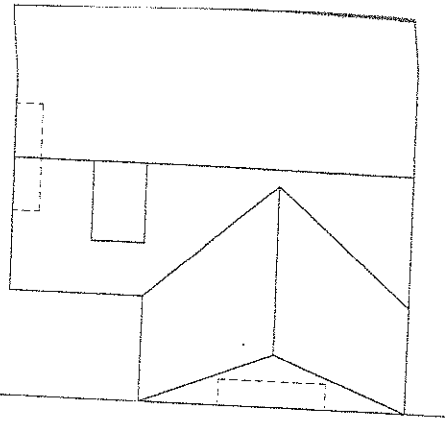
ONE POINT PERSPECTIVE

The figure below shows the views of a dwelling.
Draw a neat ONE POINT PERSPECTIVE drawing of the dwelling.
Show all construction.
Label the vanishing point.
Do not show any hidden detail.

ASSESSMENT CRITERIA

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

• project from top view to station point	1
• determine the vanishing point	2
• project to the vanishing points	1
• draw the two point perspective	36



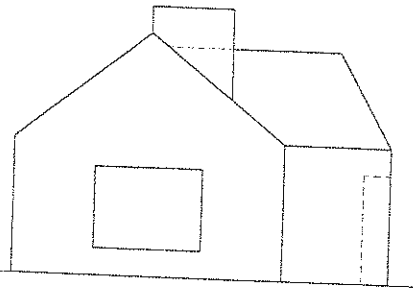
PP

PP

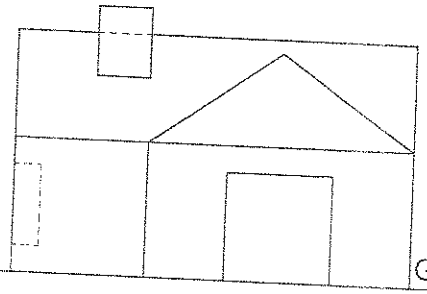
HL

HL

SP



GL



GL

NAME

ANSWER SHEET 2

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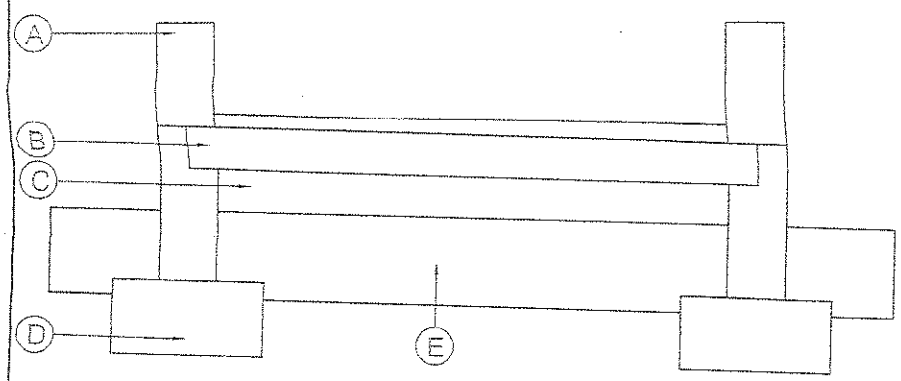
QUESTION 3
30 MARKS

CIVIL DRAWING



FEATURE	MATERIAL
A	
B	
C	
D	
E	

QUESTION 3

The incomplete sectional elevation and incomplete floor plan of a GRANNY FLAT are given.

Complete the following using the information given:

3.1. Draw the correct X-Hatching in the section elevation of the GRANNY FLAT as seen on cutting plane A-A.

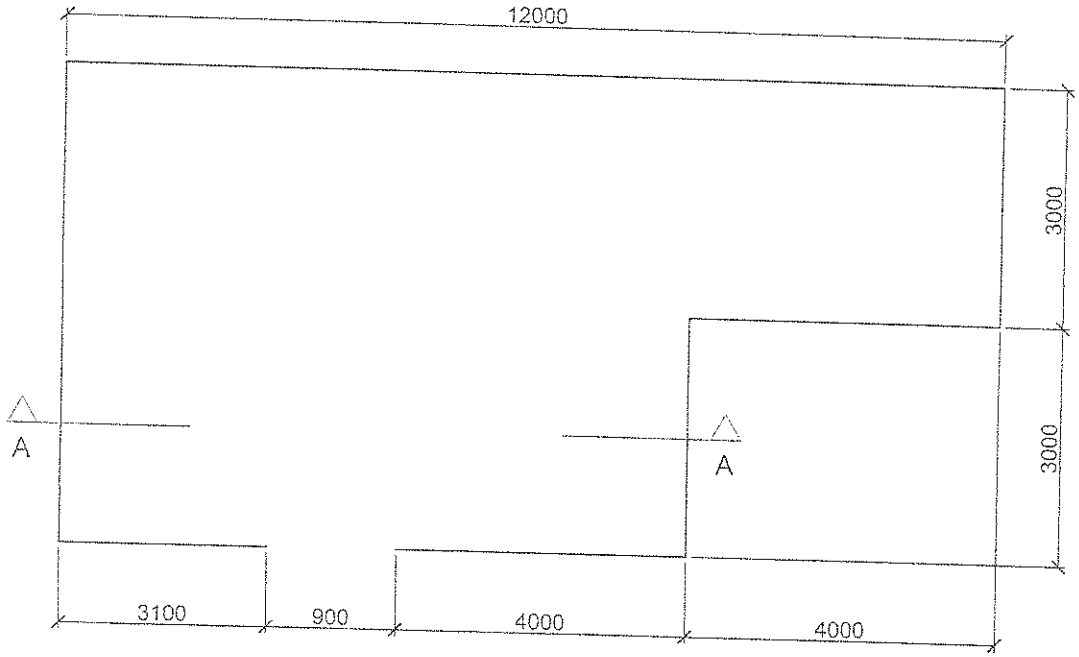
3.2. Print the following labels in the appropriate position:
4.2.1. the ground level
4.2.2. the damp proof course

3.3. Calculate the following:
4.3.1. the perimeter of the room in millimeters
4.3.2. the total area of the room in metres squared

3.4. State the material that each lettered feature is made from. Print your answers in the given table.

Information:

- all drawings must comply with the standards contained in the *SANS Code of Practice 0143*
- there is a 40mm screed on the floor slab



ASSESSMENT CRITERIA			
SECTIONAL ELEVATION			
1	WALL X-HATCHING	4	
2	FOUNDATION X- HATCHING	2	
3	HARDCORE FILL X-HATCHING	2	
4	CONCRETE SLAB X-HATCHING	2	
5	SCREED X- HATCHING	2	
6	EARTH X- HATCHING	5	
7	GROUND LEVEL LABEL	1	
8	DAMP PROOF COURSE LABEL	1	
9	FEATURE MATERIALS	5	
FLOORPLAN			
10	AREA CALCULATION	4	
11	PERIMETER CALCULATION	2	
TOTAL		30	

AREA CALCULATION	PERIMETER CALCULATION
AREA IN m^2 =	PERIMETER IN mm =

ANSWER SHEET 3

NAME