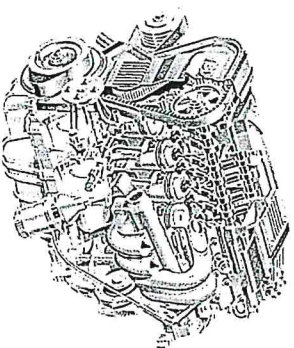
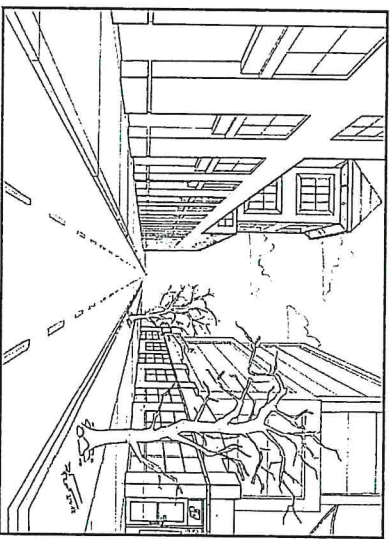
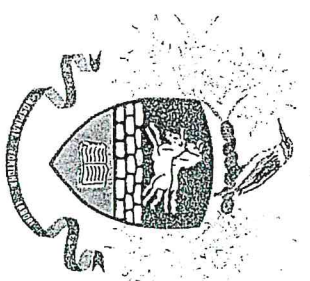


HILLCREST HIGH SCHOOL

ENGINEERING GRAPHICS AND DESIGN EXAM

NOVEMBER EXAM



GRADE 10
2020
PAPER 1

TIME: 2 hours

MARKS: 100

Examiner: Mrs Tonkin

Moderator: Mr Victor

- NB: READ THE INSTRUCTIONS**
1. This paper consists of 4 pages including the cover page and 3 questions.
 2. Answer ALL questions.
 3. Take note of the mark allocation in each question.
 4. The questions must be answered on the answer sheets provided.
 5. All the answer sheets must be re-stapled in NUMERICAL sequence and handed in irrespective of whether the question was attempted or not.
 6. Time management is essential in order to complete all the questions.
 7. Print your Name in the block provided on EVERY answer sheet.
 8. All answers must be drawn accurately and neatly.
 9. Any details or dimensions not given must be assumed in good proportion.

QUESTION	SECTION	MARK	MODERATE	MAXIMUM
1	CIVIL ANALYTICAL			25
2	SOLID GEOMETRY			35
3	CIVIL DRAWING			40
TOTAL				100

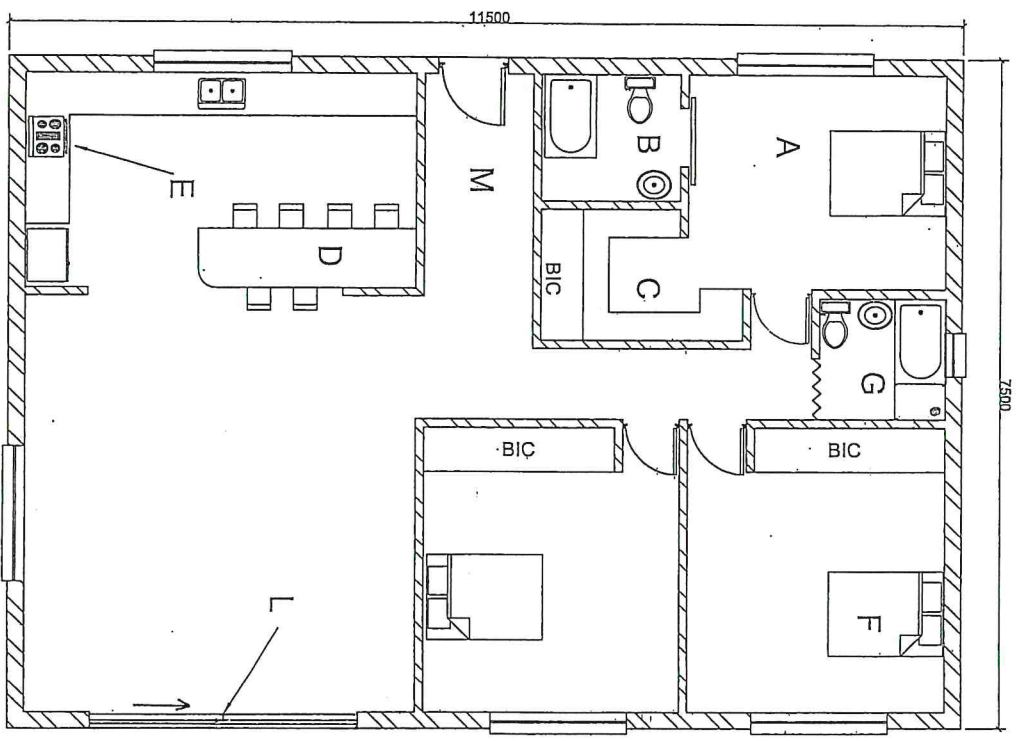
NAME: _____

TEACHER: _____

QUESTION ONE : CIVIL ANALYTICAL

GIVEN:
The floorplan and a cross section of the foundation of a granny flat.
A table of questions based on the drawing.

INSTRUCTIONS:
Complete the table below by neatly printing the answers to the questions, which all refer to the accompanying floorplan.



Question	Answer	Mark
1 Identify the room labelled A ?	GENERAL BATHROOM, DINNING TABLE, STOVE, MAIN BEDROOM, FRIDGE, OVEN, KITCHEN, SERVANTS QUARTERS, ENSUITE, SEWER, DOUBLE BED, BAR STOOL, DRESSING ROOM, LAUNDRY ROOM.	1
2 Identify the room labelled B ?		1
3 Identify the room labelled C ?		1
4 Identify the feature labelled D ?		1
5 Identify the feature labelled E ?		1
6 Identify the feature labelled F ?		1
7 Identify the room labelled G ?		1
8 How many internal doors are there?		1
9 What type of exterior door is at L ?		1
10 What type floor covering is in room B ?		1
11 How many bedrooms are in this house ?		1
12 How many windows are in this house ?		1
13 What does BIC stand for ?		1
14 Is there a shower in this house ?		1
15 How many security gates are needed ?		1
16 What type of door is in room B ?		1
17 What type of door is in room G ?		1
18 State why it is poor planning in room G ?		2
19 What would the area at M be referred to as ?		1
20 What is the perimeter of the house?		2
21 What is the area of the house ?		3

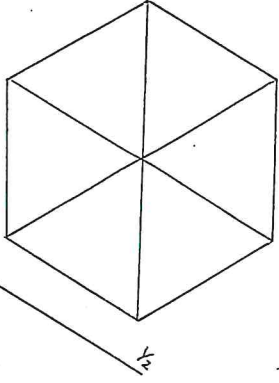
NAME : _____ GRADE / DIV. : _____

QUESTION 2 : SOLID GEOMETRY

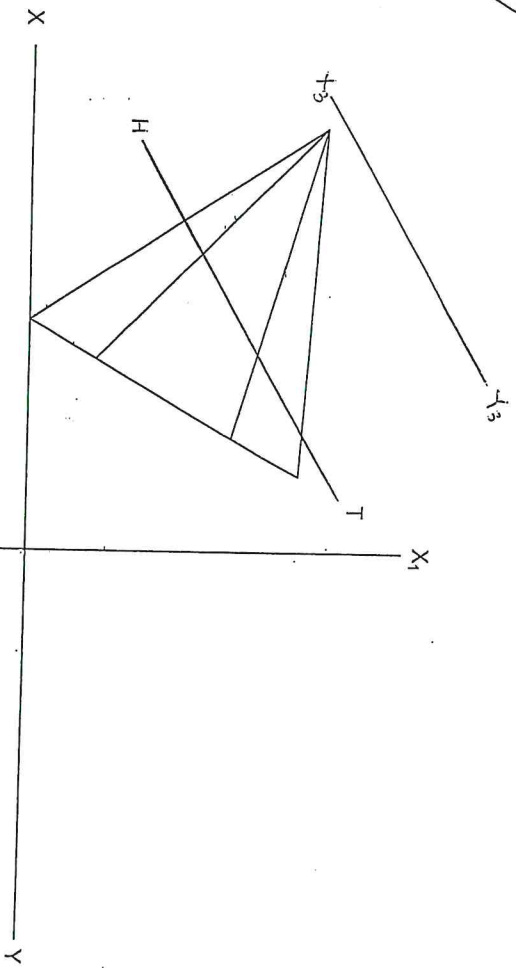
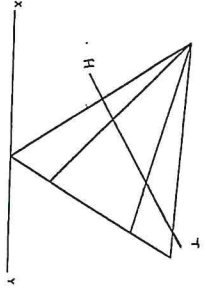
Given:

- The front and auxiliary view of a right regular hexagonal pyramid with base edge 30mm and axis height 60mm.

AUXILIARY VIEW



Instructions:
 Draw, to scale 1 : 1 the following views of the solids.
 2.1. The sectional top view.
 2.2. An outside left view
 2.2. The true shape
 Show ALL hidden detail



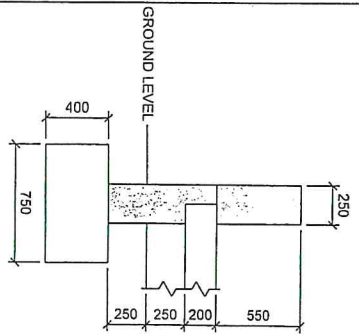
ASSESSMENT CRITERIA

1	1	SECTIONAL TOP VIEW	16	
2	2	OUTSIDE LEFT VIEW	10	
3	3	TRUE SHAPE	9	
TOTAL			35	

NAME :

GRADE / DIV. :

**SUB-STRUCTURE
DETAIL**



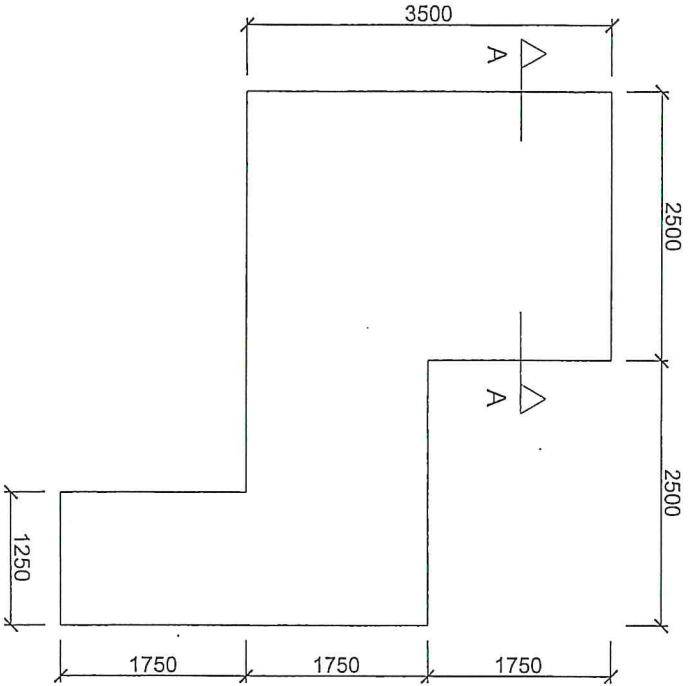
NOVEMBER
GRADE 10 P1
QUESTION 3
40 MARKS
CIVIL
DRAWING

QUESTION 3

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

Complete the following using the information given:

- 3.1. Draw the section elevation of the LAUNDRY as seen on the cutting plane A-A. Only show the sub-structure of the LAUNDRY. The foundation blocks, hardcore fill, concrete slab, ground level and part of the walls, should be included in your drawing.
 - 3.2. Print labels in the appropriate position for the ground level and the damp proof course.
 - 3.3. Hatch all the sub-structure detail using the correct hatching for each aspect.
 - 3.4. Calculate the following:
 - 3.4.1. the perimeter of the LAUNDRY in metres (work to ONE decimal place)
 - 3.4.2. the total area of the LAUNDRY in metres squared (work to TWO decimal places)
- Notes:
- all drawings must comply with SANS Code of Practice 10143
 - there is a 50mm screed on the floor slab
 - part of the left sub-structure is drawn for you
 - use a SCALE 1 : 50



AREA CALCULATION

PERIMETER CALCULATION

AREA IN m² =

PERIMETER IN m =

ASSESSMENT CRITERIA			
SECTIONAL ELEVATION			
1	WALLS	7	
2	FOUNDATION BLOCK	2	
3	HARDCORE FILL	1	
4	CONCRETE SLAB	3	
5	SCREED	1	
6	GROUND LEVEL LINES	2	
7	LABELS	2	
8	DAMP PROOF COURSE LINES	2	
9	HATCHING	15	
FLOORPLAN			
10	AREA CALCULATION	3	
11	PERIMETER CALCULATION	2	
TOTAL		40	

NAME

