

INSTRUCTIONS AND INFORMATION

1. The question paper consists of FOUR questions.
2. Answer ALL the questions.
3. All drawings are in first-angle orthographic projection unless otherwise stated.
4. All drawings must be drawn to scale 1:1, unless otherwise stated.
5. The questions must be answered on the answer sheets provided.
6. All the answer sheets must be re-stapled in numerical sequence and handed in irrespective of whether the question was attempted or not.
7. Careful time management is essential in order to complete all the questions.
8. Print your NAME in the block provided on every answer sheet.
9. All answers must be drawn accurately and neatly.
10. Any details or dimensions not given must be assumed in good proportion.

GRADE 11

**MANUFACTURING ENGINEERING &
TECHNOLOGY**

**ENGINEERING GRAPHICS AND DESIGN - P1
NOVEMBER EXAMINATION 2020**

FOR OFFICIAL USE ONLY

QUESTION	LEARNER'S MARK	MODERATED MARK
ONE		30
TWO		30
THREE		60
TOTAL	1 2 0	

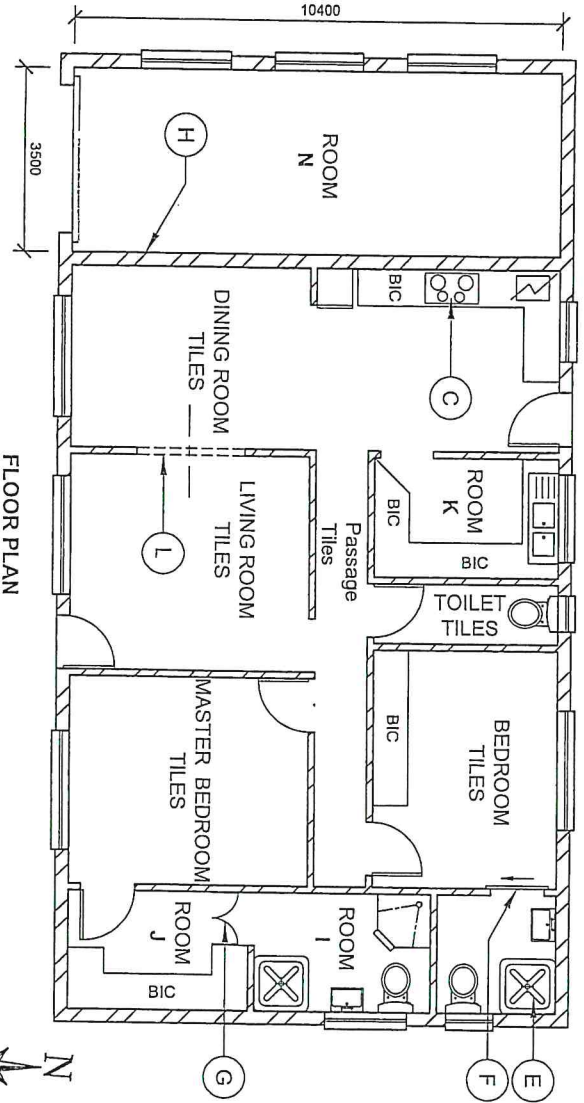
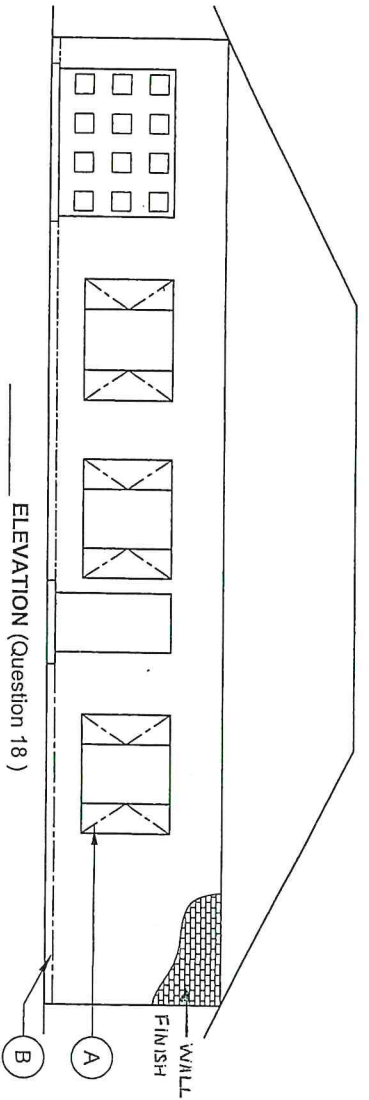
FINAL CONVERTED MARK	CHECKED BY
100	

MARKS : 100
 TIME : 3 hours
 This question paper consists of 5 pages.

QUESTION ONE : ANALYTICAL

GIVEN:
A floor plan and an elevation of a dwelling, a tile panel and a table of questions. The drawing has not been prepared to the indicated scale.

INSTRUCTIONS:
Complete the table below by neatly answering the questions, which all refer to the accompanying drawing and title panel.



DRAWN: NESCAVA	DATE: 30-03-2016	CAD: AutoCAD 2016
CHECK: SAM	DATE: 20-09-2016	DWG NO: DoE-SEPT-002-2016
ENGINEER: GARY	Proposed new dwelling for Mr. John Doe, at Grave-End Drive, on lot 19 of Klein Zeeke	
REVISION: 01	Vallei 1042.	
SCALE: 1:100	Rate No: 2056	
ANUSHA CIVIL ENGINEERING 19 Fernhoyant Drive Sydeman Durban modernliving@gmail.com www.happyhome.co.za "Realising South African Dreams since 1969"		

QUESTIONS

ANSWERS

QUESTIONS	ANSWERS
1 What is the scale of this plan?	1
2 Who is responsible for checking this plan?	1
3 In which city is this company based?	1
4 What does the line at A represent?	1
5 What does the line at B represent?	1
6 What fixture is represented at C?	1
7 What is the external wall finish?	1
8 What is the fixture at E?	1
9 What type of door is represented at F?	1
10 What type of door is represented at G?	1
11 What is room N known as?	1
12 What is room I known as?	1
13 What is room J known as?	1
14 What is room K known as?	1
15 What feature does the line L represent?	1
16 Suggest an appropriate floor finish for room N.	2
17 What type of wall is represented at H?	2
18 Provide a suitable title for the above view of the dwelling, by completing: _____ elevation ?	2
19 How many windows are seen from the East direction?	2
20 Draw freehand, the front view and top view of a BATH.	4
21 Calculate the Floor Area of room N, in meters square.	3

ANSWER QUESTION 20

ANSWER QUESTION 21

30

GRADE11

2020

NOVEMBER

2

QUESTION THREE : INTERPENETRATION AND DEVELOPMENT

GIVEN :

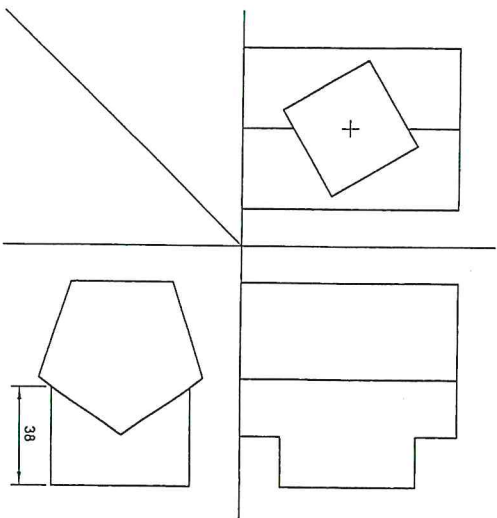
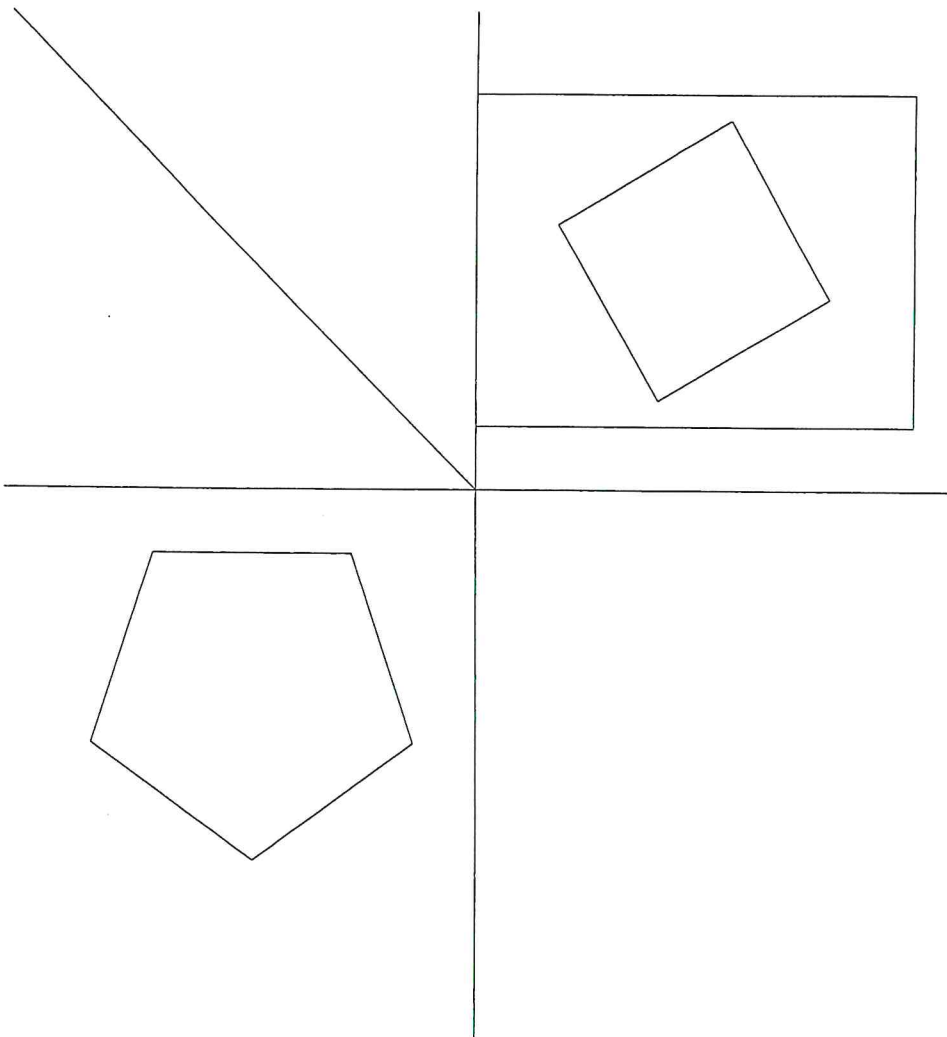
The incomplete right view and top view of a square prism that has been shaped to fit around a right regular pentagonal prism.

INSTRUCTIONS :

- Complete the given right view.
- Complete the given top view.
- Determine the line of interpenetration in the front view by means of projection.
- Develop the surfaces of the square prism

NB :

- The axes of both solids lie in a common vertical plane.
- Show all necessary constructions and hidden detail.



ASSESSMENT CRITERIA

1	TOP VIEW	3	
2	FRONT VIEW	10	
3	RIGHT VIEW	3	
4	DEVELOPMENT	14	
TOTAL		30	

START DEVELOPMENT
OF SQUARE PRISM
HERE



FEATURES:

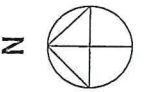
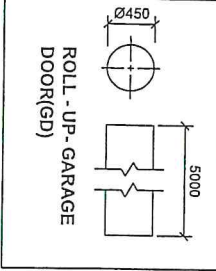
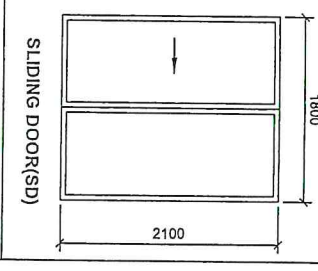
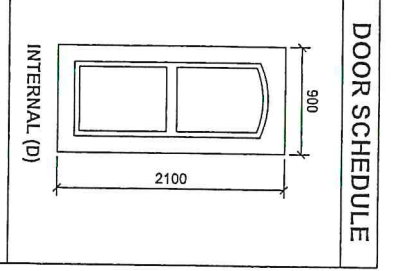
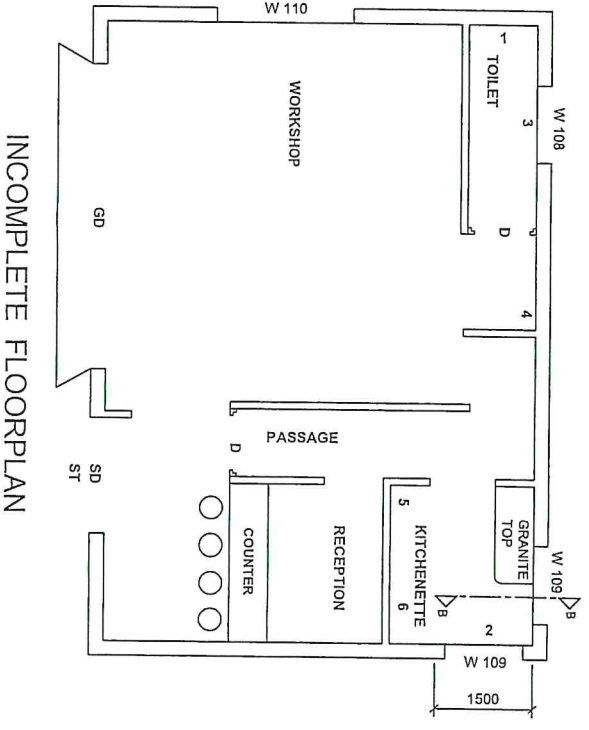
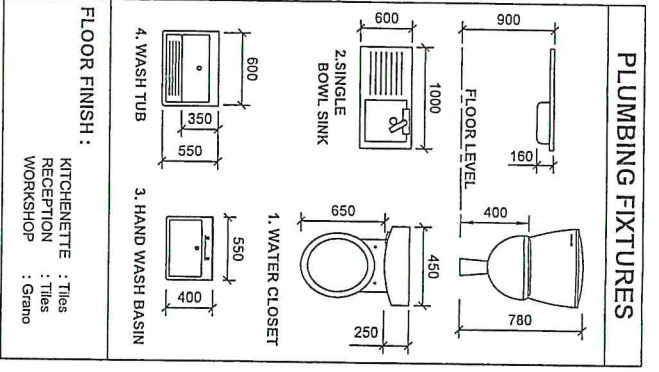
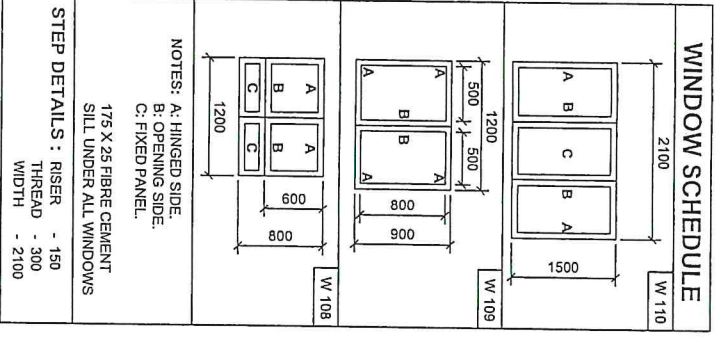
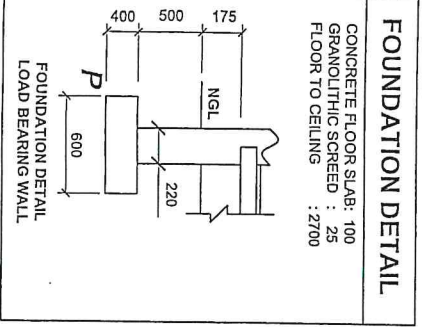
D : DOOR
 SD : SLIDING DOOR
 ST : STEP
 GD : GARAGE DOOR
 W108 : WINDOWS

FIXTURES:

1. : WATER CLOSET
 2. : SINGLE BOWL SINK
 3. : HAND WASH BASIN
 4. : WASH TUB
 5. : FRIDGE
 6. : BUILT - IN - CUPBOARD

APPLIANCE and FIXTURE

5. FRIDGE : 650 X 650 X 1800
 6. BUILT - IN - CUPBOARD : 1500 X 450 X 2100



QUESTION FOUR CIVIL DRAWING

- GIVEN:**
- The incomplete floor plan of a WHEEL ALIGNMENT CENTER, showing the walls and the position of : windows, doors, fixtures, fixtures.
 - The incomplete foundation and wall details.
 - A door and window schedule, and plumbing fixtures. Dimensions for appliance, fixture and step.

INSTRUCTIONS:

- Answer this question on page 6.
- 4.1. Draw, in first angle orthographic projection and to a scale 1 : 50, the following views of the dwelling: 4.1.1. The Complete Floor Plan.
- 4.1.2 The Complete North Elevation.
- 4.2. Draw A Sectional Elevation on cutting plane BB, using a scale 1 : 20. Start at corner P of the foundation, as shown.

All drawing must comply with the guidelines and conventions as contained in the SANS 10143 document.

SPECIFICATIONS :

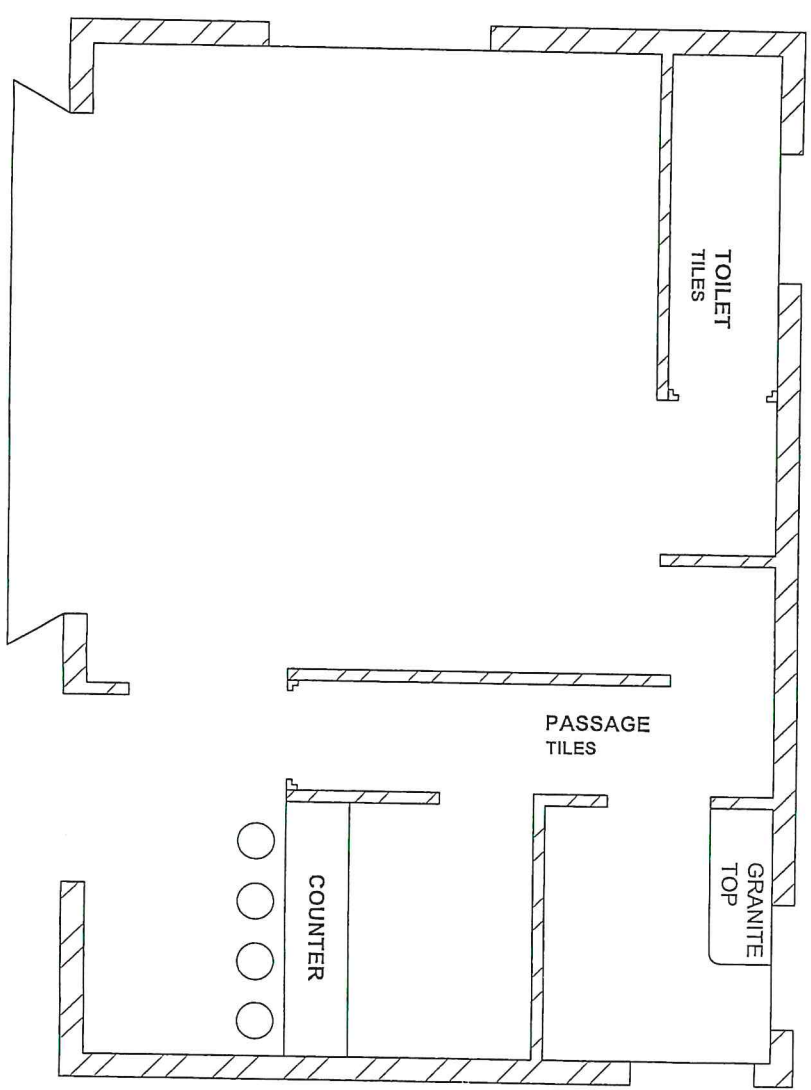
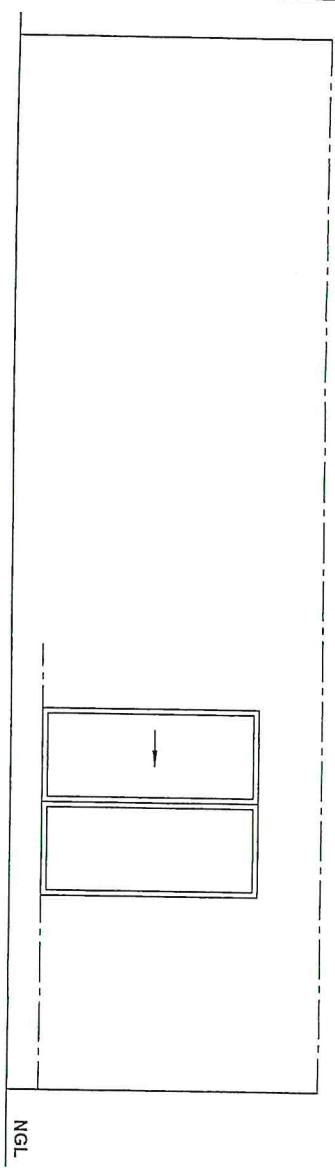
- THE FLOOR PLAN (SCALE 1:50)**
- Add the following features to your drawing:
 - All doors and windows.
 - All fixtures and features as indicated by the letters and numbers on the given table.
 - Add a step in front of the Sliding Door.
 - Include all room designations and floor finish.

- THE NORTH ELEVATION (SCALE 1:50)**
- Show the following features on your drawing.
 - Garage door and Ramp.
 - Step.
 - Include appropriate labels.

- THE SECTIONAL ELEVATION (SCALE 1:20)**
- Show the following features on your drawing:
 - The complete foundation details and walls.
 - The window detail with a double lintel above.
 - All features and fixtures to the right of the cutting plane.
 - All hatching details.
 - Start drawing the foundation at corner P.

- Note:**
- Use correct abbreviations to label the following features in the correct views: ground level, finished floor level, damp proof course, and fixtures and appliances in the Kitchenette.
 - Label all elevations and scale used.
 - You may draw the substructure-hatching, freehand.

MARKS 60



FLOOR PLAN
SCALE 1:50

ASSESSMENT CRITERIA	
SECTIONAL ELEVATION	
1	WALLS, LINE BRK
2	FOUNDATION
3	WINDOW & LINT.
4	HATCHING
5	FIXTURES
6	LABELS
SUB TOTAL	

FLOOR PLAN	
1	STEP
2	DOORS
3	WINDOWS
4	FIXTURES
5	CUTTING PLANE
6	LABELS
SUB TOTAL	

NORTH ELEVATION	
1	STEP
2	GARAGE DOOR & RAMP
3	LABELS & FFL
SUB TOTAL	
PENALTIES	
TOTAL	

1	STEP	1
2	GARAGE DOOR & RAMP	3
3	LABELS & FFL	2
SUB TOTAL		6
PENALTIES		
TOTAL		60