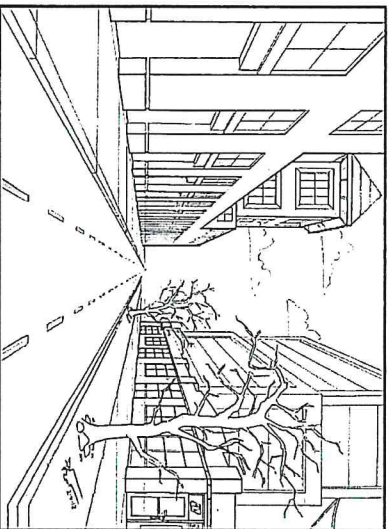


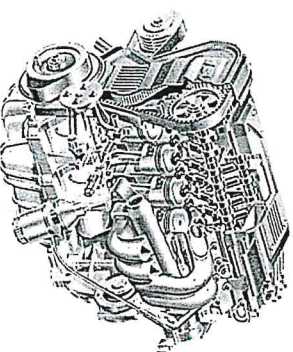
# HILLCREST HIGH SCHOOL

## ENGINEERING GRAPHICS AND DESIGN EXAM

### NOVEMBER EXAM



GRADE 10  
2020  
PAPER 2



**TIME: 2 hours**

**Examiner: Mrs Tonkin**

**MARKS: 100**

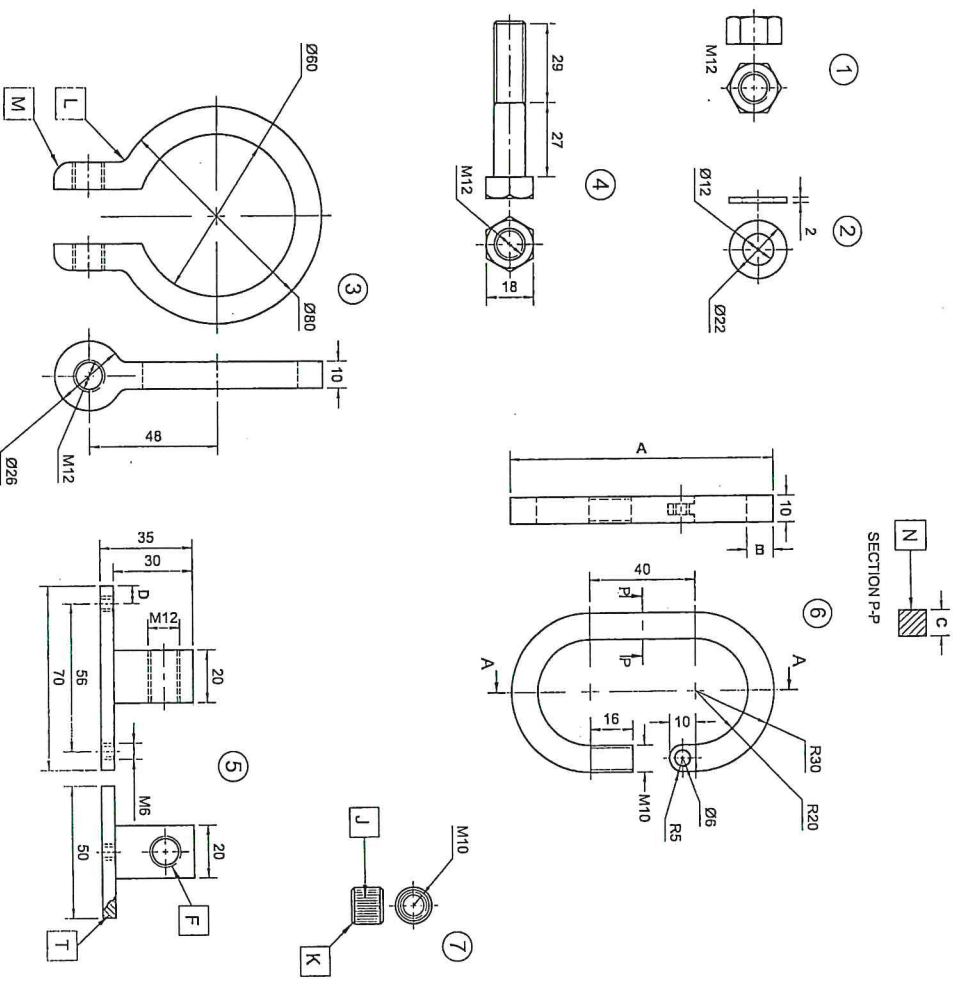
**Moderator: Mr Victor**

#### **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	MECHANICAL ANALYTICAL			25
2	ISOMETRIC			30
3	CASTING			45
TOTAL				100

NAME:  
TEACHER:



ALL UNDIMENSIONED RADII ARE R3

DIMENSIONS IN MILLIMETRES	SCALE 1:10	2-SHAFT LENGTH	2018/08/25
DRAWING NO: SOX 41	TREATMENT :NONE	1-INSERT WEB	2018/08/10
MATERIAL:CAST IRON	QUANTITY :200 UNITS	REVISIONS	DATE

**GREEN CROSS AUTO**  
 26 Chief Albert Street, Kwa Dukuza  
 www.green.co.za  
 032 552 2295  
 email:shaashre@elkomsa.net

**CLAMP KIT**

DRAWN:THABISO  
 CHECKED:ZAMA  
 APPROVED:NIKHIL

2018/08/08  
 2018/08/22  
 2018/08/26

**QUESTION 1: ANALYTICAL (MECHANICAL)**

Given:  
 A detailed drawing showing views of a TOOL HOLDER, a title block and a table of questions.  
 The drawings have not been prepared to the indicated scale.

Instructions:  
 Complete the table below by neatly answering the questions, which all refer to the accompanying detailed drawing and the title block.

QUESTIONS	ANSWERS	
1 When was the drawing checked ?	1	
2 Who approved the drawing ?	1	
3 Which indicated scale has been used ?	1	
4 How many units need to be manufactured ?	1	
5 What type of section is shown at T on part 5 ?	2	
6 Determine the dimensions at : A: B: C: D:	5	
7 Identify the features at: J: K:	2	
8 Name the features shown at : L: M:	2	
9 Identify part 1.	2	
10 Identify the type of hole shown at F	1	
11 Identify part number 4	2	
12 What does the letter M stand for in M12 ?	2	
13 What type of section is shown at N on part 6 ?	1	
14 What system of projection has been used ?	2	
<b>TOTAL</b>	<b>25</b>	

NAME \_\_\_\_\_

NAME \_\_\_\_\_

NAME \_\_\_\_\_

PLEASE TURN OVER **2**

**QUESTION 4: ISOMETRIC DRAWING**

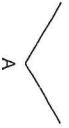
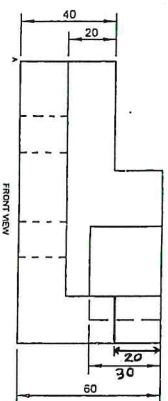
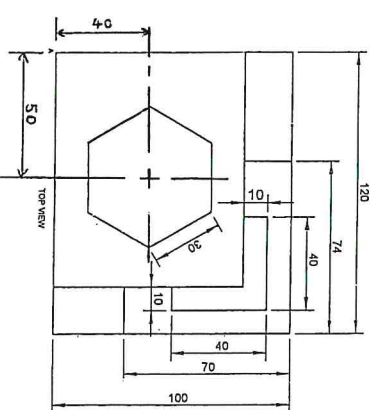
Given:

- The front view and top view of a shaped block drawn in third angle orthographic projection
- The position of point A on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the model into an isometric drawing.

- Make A the lowest point of the drawing.
- Show ALL necessary construction.
- NO stencils may be used.
- NO hidden detail is required.

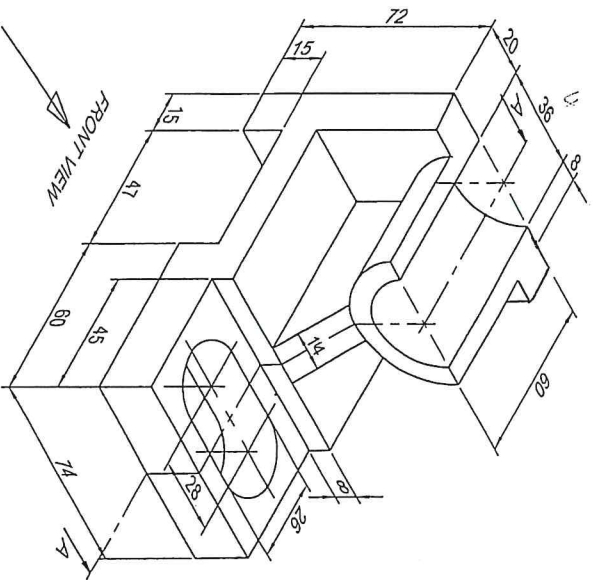


**ASSESSMENT CRITERIA**

1	ISOMETRIC LINES	16			
2	NON - ISOMETRIC LINES	3			
3	HEXAGON & AUX VIEW	11			
<b>TOTAL</b>		<b>30</b>			

NAME :

GRADE



## QUESTION

The figure above is a pictorial drawing of a GUIDE BRACKET. Do not copy this drawing. Study the drawing carefully and then complete the following in THIRD ANGLE PROJECTION :-

- 3.1. A SECTIONAL Front View on AA
- 3.2. A Top View (no hidden detail required)
- 3.3. A Right Side View
- 3.4. Print a suitable title

Draw the Projection Symbol

### ASSESSMENT CRITERIA

- FRONT VIEW 10
- TOP VIEW 9
- RIGHT VIEW 7
- HATCHING 4
- NON HATCHED SURFACES 4
- CENTRE LINES 3
- PRINTING DIMENSIONING AND SYMBOL 8

ASSESSMENT CRITERIA	
FRONT VIEW	
TOP VIEW	
RIGHT VIEW	
HATCHING	
NON-HATCH	
CENTRE LINES	
PRINT.DIM.SYM	
TOTAL	

QUESTION 45 MARKS

SYMBOL

NAME:

GRADE: