

HILLCREST HIGH SCHOOL

GRADE 11

**ENGINEERING GRAPHICS AND DESIGN
JUNE EXAMINATION 2021**

MARKS : 100
 TIME : 2 HOURS
 This question paper consists of 4 pages.

INSTRUCTIONS AND INFORMATION

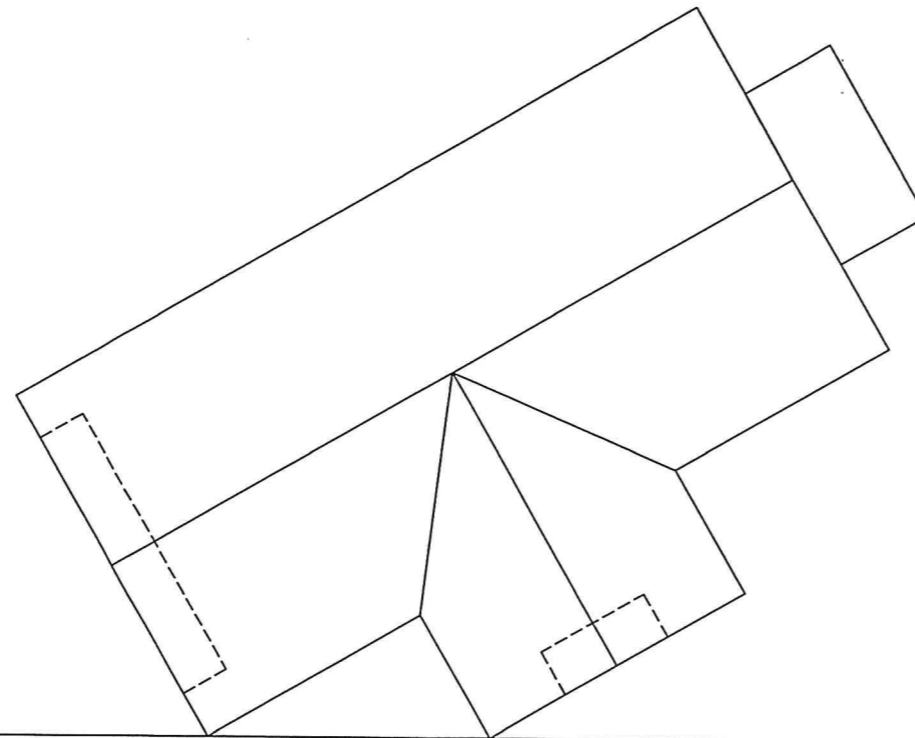
1. The question paper consists of two questions.
2. Answer ALL the questions.
3. All drawings must be drawn to scale 1:1, unless otherwise stated.
4. The questions must be answered on the answer sheets provided.
5. All the answer sheets must be re-stapled in numerical sequence and handed in irrespective of whether the question was attempted or not.
6. Careful 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.

FOR OFFICIAL USE ONLY						
QUESTION	LEARNER'S MARK				MODERATED MARK	
ONE				24		
TWO				76		
TOTAL	1	0	0			

FINAL CONVERTED MARK	CHECKED BY
100	

NAME :

GRADE :



QUESTION 1: PERSPECTIVE

Given:

Three views of a house with a pitched roof and the information needed to draw a two-point perspective drawing.

PP- Picture Plane

HL - Horizon Line

GL - Ground Line

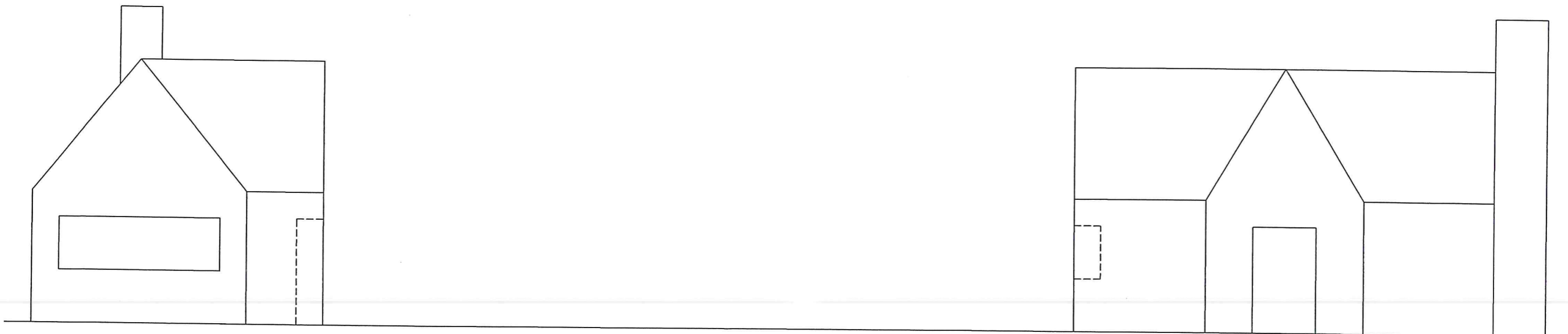
SP - Station Point

Instructions:

Complete the perspective drawing.

NOTE:

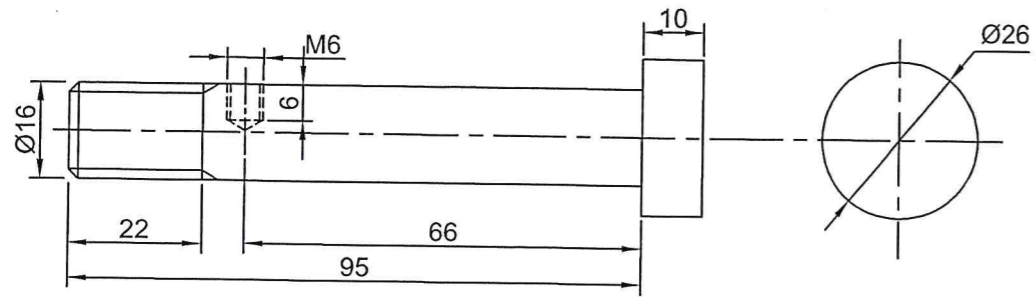
- Align the drawing sheet with the GL.
- Determine and label the vanishing points.
- Show ALL construction.
- No Hidden detail is required.



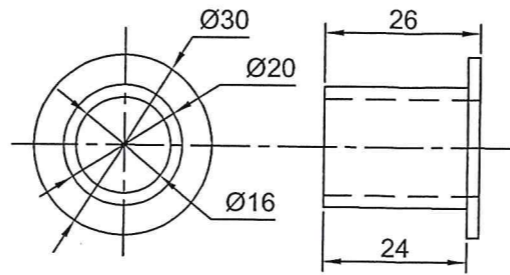
ASSESSMENT CRITERIA			
1	CONSTRUCTIONS & VP'S	4	
2	WALLS	6	
3	ROOF	5	
4	CHIMNEY, DOOR & WINDOW	9	
TOTAL		24	

NAME _____	
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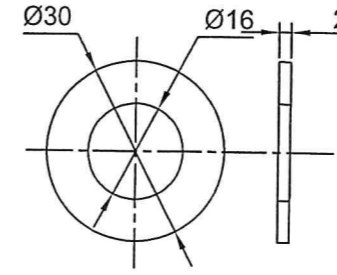
1. SHAFT



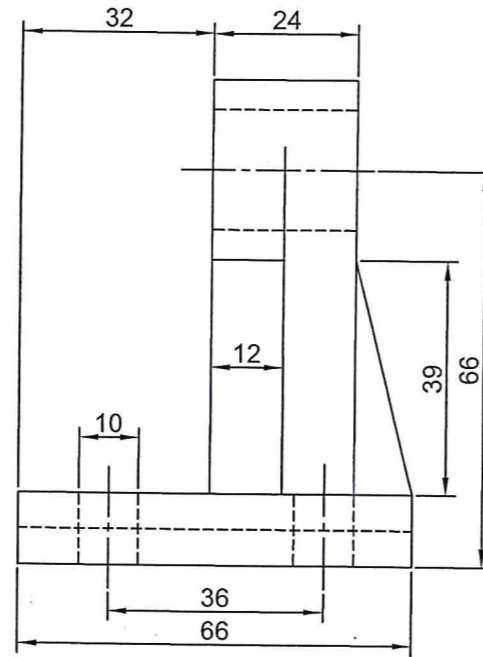
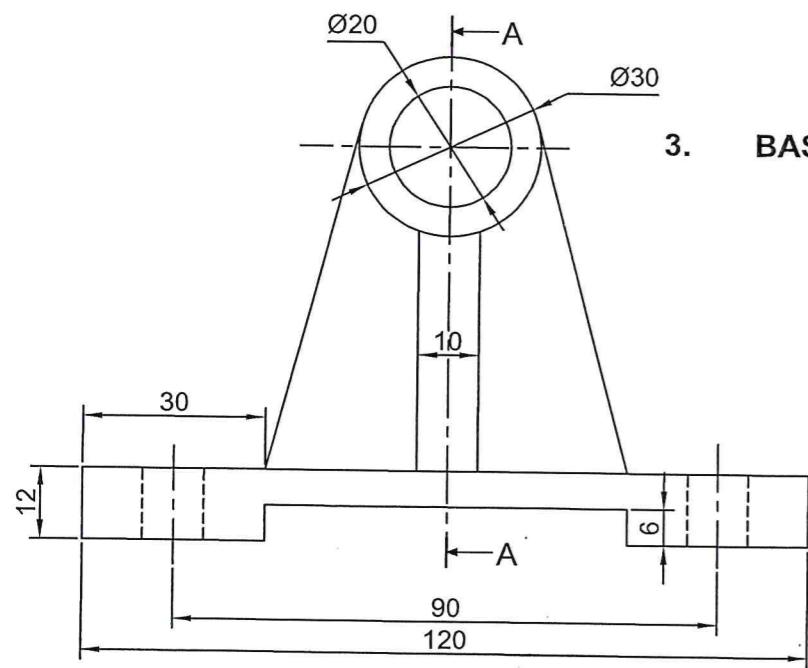
2. BUSH



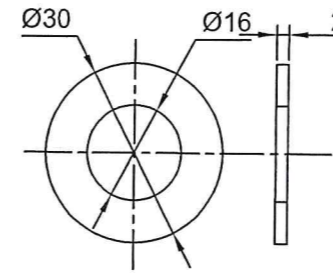
4. SPACER



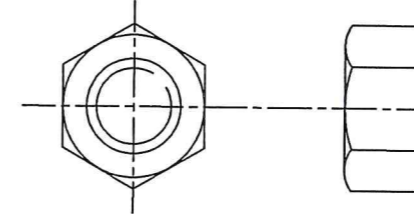
3. BASE



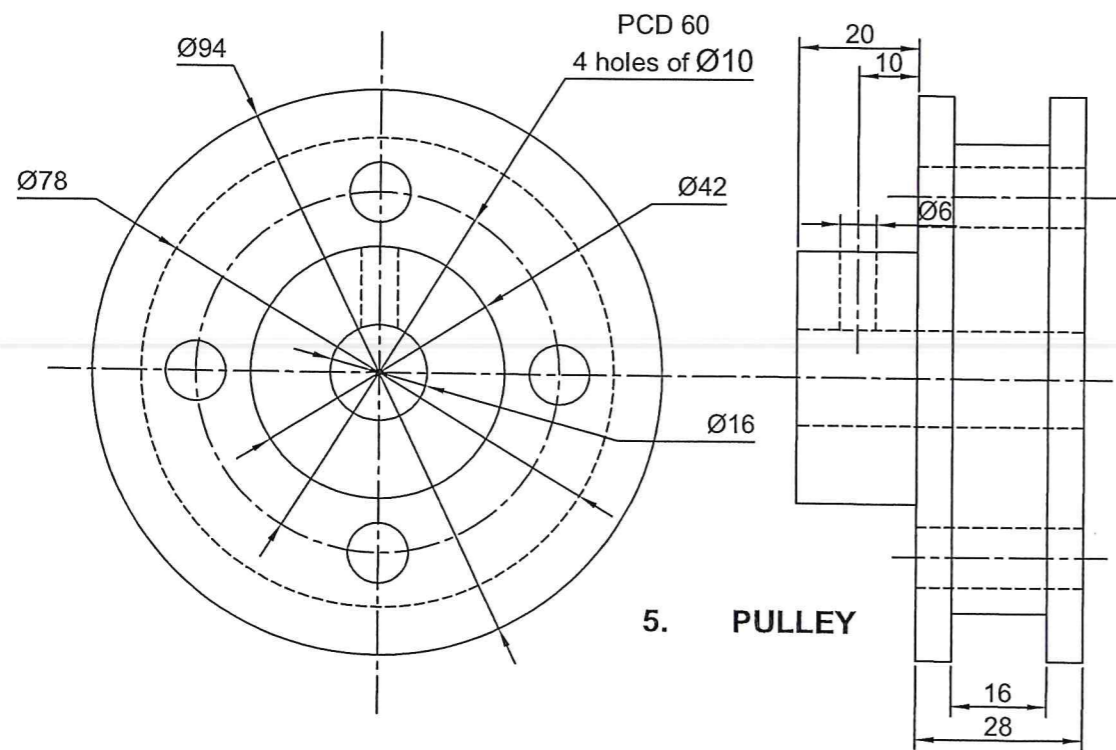
6. WASHER



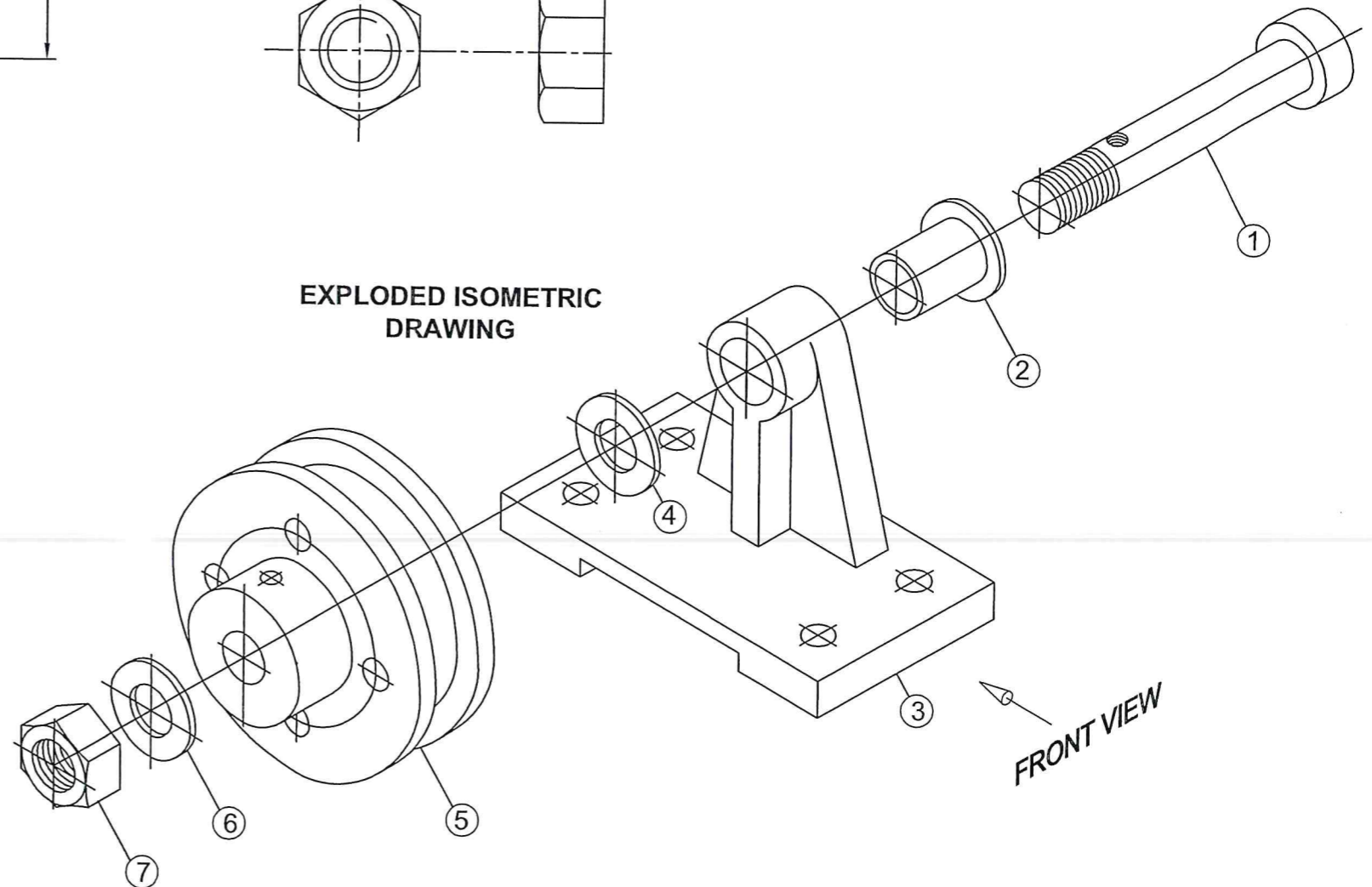
7. M16 NUT



5. PULLEY



EXPLODED ISOMETRIC DRAWING



QUESTION 2: MECHANICAL ASSEMBLY

Given:

- The exploded isometric drawing of the parts of a BEARING BRACKET, showing the position of each part relative to all the other parts.
- Orthographic views of each of the parts of the bearing bracket.

Instructions:

- Answer this question on page 4.
- Draw, to scale 1:1, and in third-angle orthographic projection, the following views of the assembled parts of the BEARING BRACKET:
 - 2.1. A **sectional front view**, on cutting plane A-A, as seen from the direction of the arrow on the exploded isometric drawing. The cutting plane is shown left view of the base (PART 3).
 - 2.2. The **left view**.

NOTE:

- Planning is essential.
- ALL drawings must comply with the guidelines as contained in the SANS10111.
- NO hidden details is required.
- Show THREE faces of the M16 Nut.

Add the following to the drawing:

- The cutting plane A-A
- Label the sectional view: SECTION ON A-A

ASSESSMENT CRITERIA			
SECTIONAL FRONT VIEW			
1	BASE	6	
2	PULLEY	11	
3	SPACER & BUSH	5	
4	WASHER	2	
5	M16 NUT	5	
6	SHAFT	13	
7	SECTION	6	
8	NON SECTION	6	
SUBTOTAL		54	
LEFT VIEW			
1	M16 NUT	2	
2	SHAFT	1	
3	PULLEY	3	
4	BASE	6½	
5	WASHER	½	
SUBTOTAL		14	
GENERAL			
1	CENTRE LINES	5	
2	CUTTING PLANE	2	
3	LABELS	1	
SUBTOTAL		8	
PENALTIES (-)			
TOTAL		76	

BEARING BRACKET	NAME _____		
SCALE 1:1	GRADE: 11	/ /2021	4