INSTRUCTIONS AND INFORMATION

1. The paper consists of FOUR questions.
2. Answer ALL the questions.
3. All drawings must be drawn to scale 1:1, unless otherwise stated.
4. All 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.

NATIONAL
SENIOR CERTIFICATE

ENGINEERING GRAPHICS AND DESIGN P2
SEPTEMBER 2013
PREPARATORY EXAMINATIONS

MARKS: 200
TIME: 3 hours
This question paper consists of 7 pages.

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QUESTION 1: LOCAL (MEASUREMENT)

- Show all necessary constructions.
- Study the given drawings carefully before you start drawing.
- Note: The given drawings cannot be drawn exactly.
- Construct the locus of B and C for one common revolution.
- Copy to scale T.1 the given view.

Instructions:
- Circles must be indicated.
- Points D and E are fixed points where moves on the path.
- With point D as center, draw a circle which passes through points A, B, C.

Given:
- A and C are fixed points and A and B are two lines.
Assessment criteria:

- Choose the correct answer and explain your choice.
- Show the calculations.
- Show all the necessary considerations.

Notes:

- Command Debater
- Argumentative
- By using the logical deductions, complete the given table in the document.
- Choose the correct answer and explain your choice.

Instructions:

- Embedded heuristic method.
- Move the cursor to the correct option and click the button.
- Complete the assessment diagram of which the aim is to...

Question 2: CAMS
Examination Number

Assessment Criteria

No hidden detail is required.
Show all necessary edges and other construction lines.
Achieve correct size of the drawing.

Section 1: Isometric Drawing.

Convert the orthographic views of the thrown into a model.

The position of point D on the drawing shall:

Given:

Question 2: Isometric Drawing
### Parts List

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<th>Part</th>
<th>Quantity</th>
<th>Material</th>
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</table>

### Notes
- All dimensions are shown in millimeters (mm).
- All dimensions are clear and accurate.
- The exploded isometric view shows the assembly layout clearly.
- The front view of the nut is in the sectional front view.
- The hidden details are not shown.

### Question: Mechanical Assembly

- What is the function of the part labeled "Pulley Tensioner"?
- How does the arrangement of the parts ensure efficiency and durability?
- What are the key dimensions that should be considered for manufacturing?

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**Note:** The above questions are not exhaustive and are meant to guide the understanding of the mechanical assembly.