INSTRUCTIONS AND INFORMATION
1. This 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 prepared using pencil and instruments, unless otherwise stated.
5. ALL answers must be drawn accurately and neatly.
6. ALL the questions must be answered on the QUESTION PAPER, as instructed.
7. ALL the pages, irrespective of whether the question was attempted or not, must be re-stapled in numerical sequence in the TOP LEFT-HAND CORNER ONLY.
8. Time management is essential in order to complete all the questions.
9. Print your examination number in the block provided on every page.
10. Any details or dimensions not given must be assumed in good proportion.

FOR OFFICIAL USE ONLY

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>MARKS OBTAINED</th>
<th>SIGN</th>
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FINAL CONVERTED MARK
100

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COMPLETE THE FOLLOWING:
- CENTRE NUMBER
- CENTRE NUMBER
- EXAMINATION NUMBER
- EXAMINATION NUMBER
QUESTION 1: ANALYTICAL (CIVIL)

Given:
The site plan of an existing housing development with a proposed new club facility, a title 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 refer to the accompanying drawing, title panel and civil content.

QUESTIONS

1. Who prepared the drawing?
2. What is the drawing number?
3. What company printed the drawing?
4. On what date was the last revision made?
5. What must the contractors do before commencing with any work?
6. What is the pitch on the pathway?
7. How wide is the new entrance to STAND 2045 in metres?
8. What is the STAND number of the amusement park?
9. What colour is used to represent new sewer lines on a drainage plan?
10. What does the abbreviation BIC stand for?
11. What does the broken line at 1 indicate?
12. What does the symbol at 2 indicate?
13. What is the abbreviation of the component that you will find at the junction at 37?
14. Name the feature at 4.
15. What are the final two components of the sewerage system?
16. Which elevation of the clubhouse faces Comic street?
17. What features make up the new club facility?
18. In the space below (ANSWER 18), determine the total length of the perimeter of STAND 2045 in metres.
19. In the space below (ANSWER 19), determine the total area of the new club facility in square metres.
20. In the space in the title panel (ANSWER 20), draw, in neat freehand, the front view and top view of the SANS 10143 graphical symbol for a SINGLE WALL-MOUNTED URINAL.

ANSWERS

1
1
1
1
1
1
1
1
1
1
1
1
1
1
1
1
1
1
1
2
1
3
3
4

TOTAL 30

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Please turn over
QUESTION 2: INTERPENETRATION AND DEVELOPMENT

Given:
- The top view and incomplete front view of a right regular hexagonal prism that has been shaped to fit over an equilateral triangular prism. The axes of both solids lie in a common vertical plane.
- An auxiliary view of the triangular prism.

Instructions:
Draw to scale 1 : 1, the following views of the TWO solids:
2.1 The given top view
2.2 The right view
2.3 The complete front view, clearly showing the curve of interpenetration
2.4 The development of the surface of the hexagonal prism. Make edge 'A' the seam.

- Planning is essential.
- Show ALL hidden detail.
- Show ALL construction.

EDGE 'A' IS THE SEAM

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<td>2 RIGHT VIEW</td>
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<td>3 FRONT VIEW</td>
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<td>4 DEVELOPMENT</td>
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TOTAL 37

EXAMINATION NUMBER
QUESTION 3: PERSPECTIVE

Given:
Two views of a house with a pitched roof, the
detail of the ramp 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.
- Align the drawing sheet with the ground line (GL).
- Determine and label the vanishing points.
- Show ALL construction.
- NO interior detail is required.
- NO hidden detail is required.

ASSESSMENT CRITERIA

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<td>1</td>
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**QUESTION 4: CIVIL DRAWING**

**Given:**
- The incomplete north elevation of a new self-contained flatlet, showing the walls, sliding door and window openings, the roof and labels.
- The incomplete floor plan showing the walls, steps, position of the doors, windows, fixtures and the electrical layout.
- A schematic diagram of a roof truss for roof 'A' and roof notes.
- Room designations and floor finishes.
- The incomplete foundation and external wall detail.
- A window and door schedule.
- A table of fixtures.
- A table of electrical symbols.
- A table of roof components.
- The incomplete floor plan of the new self-contained flatlet, drawn to scale 1:50, and the incomplete foundation and break line for the detailed section, drawn to scale 1:20, on page 6.

**Instructions:**
Answer this question on page 6.

4.1 Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new self-contained flatlet:

4.1.1 THE COMPLETE FLOOR PLAN
Add the following features to the drawing:
- All doors and windows.
- The fixtures as indicated by the abbreviations.
- All electrical fittings as indicated by the numbers.
- All hatching detail.

4.1.2 THE COMPLETE NORTH ELEVATION
Show the following features on the drawing:
- The outside walls, steps, window and door detail.
- The roof detail, including the barge boards, fascia board, gutter and rainwater down-pipe.
- The finished floor level.

4.2 Using the incomplete foundation on page 6, draw, to scale 1:20, a DETAILED SECTION on cutting plane A-A of the area in the ellipse shown on the incomplete floor plan.
Show the following features on the drawing:
- The complete foundation and external wall detail.
- The window detail.
- The roof detail, including the fascia board, gutter and barge boards.
- The bath.
- All hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

Label the following:
- The north elevation.
- The room designations and floor finishes.
- Ground level, finished floor level and camp-proof course (use the correct abbreviations and show it on ALL the relevant views).

**NOTE:**
ALL drawings must comply with the guidelines and graphical symbols as contained in the SANS 10143.