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 completed using 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 must be re-stapled in numerical sequence, irrespective of whether the question was attempted.
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.

Please turn over
NOTE:
Contractors must verify all dimensions and levels on site before commencing work. Architects to be notified immediately of any discrepancies.

20. In the space below, draw, in neat freehand, the front view and top view of the SANS 10143 graphical symbol (convention) for a SHOWER.

QUESTION 1: ANALYTICAL (CIVIL)

Given:
The site plan of an existing house with a proposed new swimming pool, 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 all refer to the accompanying drawing and title panel.

[30]

QUESTIONS

1. On what date was the plan approved?

2. Who prepared the site plan?

3. What scale is indicated for the drawing?

4. What is the project number?

5. What is the name of the draughting firm?

6. How many stands border erf number 1098?

7. What is the fall on the existing sewerage line?

8. How deep is the municipal sewerage connection in metres?

9. Name the encircled feature at 1.

10. Name the feature labelled 'G' at 2.

11. What does the arrow in the circle at 3 indicate?

12. Name the feature at 4.

13. Name the feature at 5.

14. Which elevation of the existing house faces the pool?

15. How long is the north-eastern boundary line of erf 1098 in metres?

16. What is the width and length of the swimming pool in metres?

17. Determine the area of the concrete paving around the swimming pool in square metres. Show all calculations.

18. Determine the perimeter of erf 1098 in metres. Show all calculations.

19. Determine the shortest distance from the swimming pool to the south-eastern building line in metres. Show all calculations.

20. In the space provided in the title panel, draw, in neat freehand, the front view and top view of the SANS 10143 graphical symbol (convention) for a SHOWER.

TOTAL 30
QUESTION 2: TRANSITION PIECE

Given:
The front view and top view of a square-to-round transition piece.

Instructions:
Draw, to scale 1 : 1, the following:
2.1 The given front view and top view
2.2 The development of the surface of the transition piece. Make AB the seam.

Show ALL necessary construction. [35]
QUESTION 3: PERSPECTIVE

Given:
Two views showing the interior of a kitchen 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 necessary construction.
- Show the wall thickness at the window.
- Show the depth of the washing machine drum.
- NO hidden detail is required. [39]

PP

HL

GL

+ SP
QUESTION 4: CIVIL DRAWING

Given:
- The incomplete north elevation of a new house, showing the walls, the entrance opening, the roof and notes.
- The incomplete floor plan, showing the walls, position of the doors, windows, fixtures and the electrical fittings.
- Roof notes and a schematic diagram of a roof truss.
- The floor finishes and a diagram showing the room designations.
- The incomplete foundation, wall detail of an internal and an external wall.
- A table of roof components.
- A table of electrical symbols.
- A window and door schedule.
- A table of fixtures.
- The incomplete floor plan of the new house, drawn to scale 1:50, on page 6.

Instructions:
- Answer this question on page 6.
- Using the given incomplete floor plan, draw, in first-angle orthographic projection and to scale 1:50, the following views of the new house:
  4.1 The complete floor plan.
  4.2 The north elevation.
  4.3 A sectional elevation on cutting plane A-A.

ALL drawings must comply with the guidelines and graphical symbols contained in the SANS 10743.

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

THE NORTH ELEVATION
Show the following features on the drawing:
- The outline wall and the finished floor level.
- The double doors and step.
- The roof detail, including the barge boards and fascia board.

THE SECTIONAL ELEVATION
Show the following features on the drawing:
- The complete foundation, wall, slab, roof and ceiling detail.
- The window detail, with a double tinted.
- The detail of the window on the east-facing wall.
- All hatching detail.

Label the following:
- The room designations with floor finishes.
- The north elevation and the sectional elevation.
- Using the correct abbreviations, label the following features.
- In the correct view, natural ground level, finished floor level and damp-proof course.

NOTE:
ALL substructure hatching may be drawn in freehand.
### ASSESSMENT CRITERIA

#### FLOOR PLAN

<table>
<thead>
<tr>
<th></th>
<th>POSSIBLE</th>
<th>OBTAINED</th>
<th>SIGN</th>
<th>MODERATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. LABELS</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ELECTRICAL</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. FIXTURES</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. DOORS + WINDOWS</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. MACHING</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>45</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### NORTH ELEVATION

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SMILE + PKL + STOP</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ROOF + RAIN GUTTER + RIDGE</td>
<td>6½</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. DOOR</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. LABELS</td>
<td>1½</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>13</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### SECTIONAL ELEVATION

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ROOF</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. WALL + FLOOR + FOUNDATION</td>
<td>11½</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. WINDOWS</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. MACHING</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. LABELS</td>
<td>2½</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>38</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>96</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

FLOOR PLAN
SCALE 1 : 50