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.

MARKS: 100
TIME: 3 hours

This question paper consists of 6 pages.
ANSWER 19
In the space below, draw, in neat hand and according to the SANS 10143:
(a) FACE BRICK hatching
(b) The graphical symbol for a GULLY

QUESTIONS

<table>
<thead>
<tr>
<th></th>
<th>ANSWERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is the title of the drawing?</td>
</tr>
<tr>
<td>2</td>
<td>On what date was the drawing prepared?</td>
</tr>
<tr>
<td>3</td>
<td>What scale is indicated for the drawing?</td>
</tr>
<tr>
<td>4</td>
<td>What is the name of the proposed new street?</td>
</tr>
<tr>
<td>5</td>
<td>How many existing buildings are there on STAND 3289?</td>
</tr>
<tr>
<td>6</td>
<td>How many parking bays are shown?</td>
</tr>
<tr>
<td>7</td>
<td>What does the abbreviation RE stand for?</td>
</tr>
<tr>
<td>8</td>
<td>How wide are the pavements in millimetres?</td>
</tr>
<tr>
<td>9</td>
<td>What do the two arcs at 1 Indicate?</td>
</tr>
<tr>
<td>10</td>
<td>Name the feature at 2.</td>
</tr>
<tr>
<td>11</td>
<td>How many manholes are shown?</td>
</tr>
<tr>
<td>12</td>
<td>What type of fencing surrounds STAND 3289?</td>
</tr>
<tr>
<td>13</td>
<td>What feature is shown on STAND 3289?</td>
</tr>
<tr>
<td>14</td>
<td>What is the number of the STAND south west of STAND 3289?</td>
</tr>
<tr>
<td>15</td>
<td>Why is the existing ramp shown with broken lines?</td>
</tr>
<tr>
<td>16</td>
<td>What does the arrow on the line at 3 Indicate?</td>
</tr>
<tr>
<td>17</td>
<td>What is the fall of the sewer line?</td>
</tr>
<tr>
<td>18</td>
<td>In what colour could new concrete be indicated on a layout drawing?</td>
</tr>
<tr>
<td>19</td>
<td>In the space in the title panel (ANSWER 19), draw, in neat hand and according to the SANS 10143 a) FACE BRICK hatching, and b) the graphical symbol for a GULLY.</td>
</tr>
<tr>
<td>20</td>
<td>In the space below (ANSWER 20), determine the total length of the fence in metres.</td>
</tr>
<tr>
<td>21</td>
<td>In the space below (ANSWER 21), determine the total area of the proposed new auto parts building in square metres. Round off the answer to THREE decimal places.</td>
</tr>
</tbody>
</table>

TOTAL 30
QUESTION 2: SOLID GEOMETRY

Given:
- The front view of a right equilateral triangular pyramid and a right regular hexagonal prism
- The top view of the pyramid and the axis of the prism
- An auxiliary view of the prism
- Cutting plane A-A

Specifications:
- The prism leans against the pyramid.
- Both solids are cut by cutting plane A-A.

Instructions:
Draw, to scale 1 : 1, the following views of the TWO solids:
2.1 The given front view
2.2 A sectional top view
2.3 A sectional left view
2.4 The true shape of the cut surfaces

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

<table>
<thead>
<tr>
<th>ASSESSMENT CRITERIA</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 CONSTRUCTION</td>
<td>1</td>
</tr>
<tr>
<td>2 FRONT VIEW</td>
<td>5 ½</td>
</tr>
<tr>
<td>3 SECTIONAL TOP VIEW</td>
<td>14 ½</td>
</tr>
<tr>
<td>4 SECTIONAL LEFT VIEW</td>
<td>12 ½</td>
</tr>
<tr>
<td>5 TRUE SHAPE</td>
<td>6 ½</td>
</tr>
</tbody>
</table>

TOTAL 40
QUESTION 3: PERSPECTIVE

Given:
Two complete views and a partial view of a function hall 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 internal lines seen through the doorway.
• Show ALL construction.
• NO hidden detail is required.

ASSESSMENT CRITERIA

<table>
<thead>
<tr>
<th></th>
<th>CONSTRUCTION</th>
<th>OUTER STRUCTURE</th>
<th>INNER STRUCTURE</th>
<th>SIDE STRUCTURE</th>
<th>ARCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<td>3</td>
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<td>4</td>
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<td>5</td>
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</table>

PENALTIES (-)

TOTAL 37

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QUESTION 4: CIVIL DRAWING

Given:
- The incomplete west elevation of a new house showing the walls, the sliding door and window openings, the roof and notes.
- The incomplete floor plan showing the walls, positions of the doors, windows, fixtures and the electrical layout.
- A schematic diagram of a roof truss and roof notes.
- The incomplete detail of the foundations and walls for the veranda.
- Room designations and floor finishes.
- A table of electrical symbols.
- A door and window schedule.
- A table of roof components.
- A table of fixtures.
- The incomplete floor plan of the new house, drawn to scale 1:50, and the incomplete foundation and break line of 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 house:

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 ELEVATION
Show the following features on the drawing:
- The outside walls, sliding door and window detail.
- The veranda detail.
- The roof detail, including the roof cap, barge boards, fascia board, gutter and rainwater down-pipe.
- The finished floor level.

4.2 Using the incomplete foundation and break line on page 6, draw, to scale 1:20, a detailed section on cutting plane C-C of the area in the ellipse shown on the incomplete floor plan.
Show the following features on the drawing:
- The complete detail of the foundations and walls for the veranda.
- The door detail.
- The roof detail, including the fascia board, gutter and barge boards.
- ALL hatching detail. ONLY the substructure hatching may be drawn in neat freehand.

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

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