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.

FOR OFFICIAL USE ONLY

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>MARKS OBTAINED</th>
<th>% SIGN</th>
<th>MODERATED</th>
<th>% SIGN</th>
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<tbody>
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FINAL CONVERTED MARK

CHECKED BY

100

COMPLETE THE FOLLOWING:

CENTRE NUMBER

CENTRE NUMBER

EXAMINATION NUMBER

EXAMINATION NUMBER
QUESTION 1: ANALYTICAL (CIVIL)

Given:
A site plan of a hotel with a proposed new conference centre, 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 and title panel.

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>ANSWERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. On what date was the site plan printed?</td>
<td>1</td>
</tr>
<tr>
<td>2. What must the contractors do on site before commencing with any work?</td>
<td>1</td>
</tr>
<tr>
<td>3. What scale is indicated for the drawing?</td>
<td>1</td>
</tr>
<tr>
<td>4. What was the first revision?</td>
<td>1</td>
</tr>
<tr>
<td>5. What is the surface finish of the new road?</td>
<td>1</td>
</tr>
<tr>
<td>6. What new development is proposed for the hotel?</td>
<td>1</td>
</tr>
<tr>
<td>7. In what colour would new timber be presented on a drawing?</td>
<td>1</td>
</tr>
<tr>
<td>8. In what colour would new steel be presented on a drawing?</td>
<td>1</td>
</tr>
<tr>
<td>9. What does the number at 1 indicate?</td>
<td>1</td>
</tr>
<tr>
<td>10. Name the feature at 2.</td>
<td>1</td>
</tr>
<tr>
<td>11. What does the line at 3 indicate?</td>
<td>1</td>
</tr>
<tr>
<td>12. Name the feature at 4.</td>
<td>1</td>
</tr>
<tr>
<td>13. Name the feature at 5.</td>
<td>1</td>
</tr>
<tr>
<td>14. On what must the paving in the new parking lot be laid?</td>
<td>1</td>
</tr>
<tr>
<td>15. In which road is the new exit from the hotel?</td>
<td>2</td>
</tr>
<tr>
<td>16. What is the length of the south western wall on the new conference centre in metres?</td>
<td>2</td>
</tr>
<tr>
<td>17. What is the shortest distance from the new conference centre to the boundary line on North Way in metres?</td>
<td>2</td>
</tr>
<tr>
<td>18. In the space below, determine the perimeter of the new conference centre in metres.</td>
<td>3</td>
</tr>
<tr>
<td>19. In the space below, determine the total area of the new conference centre in square metres.</td>
<td>3</td>
</tr>
<tr>
<td>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 for a SINGLE URINAL.</td>
<td>4</td>
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</tbody>
</table>

TOTAL 30
QUESTION 2: SOLID GEOMETRY

Given:
The front view and the top view of a right regular hexagonal prism with a right square hole and a right regular pentagonal pyramid.

Specifications:
- One base edge of the hexagonal prism is in contact with one base edge of the pentagonal pyramid.
- Both solids are cut by a cutting plane VT.

Instructions:
Draw, to scale 1:1, the following views of the two solids:
1. The given front view.
2. The sectional top view.
3. The sectional left view. Show ALL hidden detail.

Show ALL necessary construction. [38]

ASSESSMENT CRITERIA

<table>
<thead>
<tr>
<th>Item</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>1. Const. + Front View</td>
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<tr>
<td>2. Sectional Top View</td>
<td>12 1/2</td>
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<tr>
<td>3. Sectional Left View</td>
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<tr>
<td>4. Hatching</td>
<td>3 1/2</td>
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<td>PENALTIES (-)</td>
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<td>TOTAL</td>
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EXAMINATION NUMBER 38

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QUESTION 3: PERSPECTIVE

Given:
Two views of an outside entertainment area
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 openings.
• Show the floor tiles.
• NO hidden detail is required.

<table>
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<tr>
<th>ASSESSMENT CRITERIA</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>PENALTIES</th>
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<td>2</td>
<td>WALLS + TILES</td>
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<td></td>
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<tr>
<td>3</td>
<td>OPENINGS + SEATING</td>
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<tr>
<td>4</td>
<td>SEMI-CIRCLE</td>
<td>7</td>
<td></td>
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</tr>
</tbody>
</table>

TOTAL 39
QUESTION 4: CIVIL DRAWING

Given:
- The incomplete north elevation of a new dwelling, showing the walls, the roof and notes.
- The incomplete floor plan showing the walls, position of the doors and windows, the fixtures and electrical layout.
- The incomplete detail of the footing/foundation of an internal and an external wall.
- Roof notes with schematic diagrams of the TWO types of roof trusses.
- A diagram showing the room designations and a list of floor finishes.
- A door and window schedule.
- A table of electrical symbols.
- A table of roof components.
- A table of fixtures.
- The incomplete floor plan of the new dwelling, 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 dwelling:
  4.1 The complete floor plan.
  4.2 The complete 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 10143.

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

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

THE SECTIONAL ELEVATION
Show the following features on the drawing:
- The complete footing or foundation, wall, roof and ceiling detail.
- The window detail, with a DOUBLE Inset.
- All features to the west of the cutting plane.
- All hatching detail.

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

NOTE:
- ONLY the substructure hatching may be drawn in neat freehand.