higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE:
MULTIDISCIPLINARY DRAWING OFFICE PRACTICE

COMPUTER-AIDED DRAUGHTING

(6010035)

12 August 2021 (X-paper)
09:00–12:00

CLOSED-BOOK EXAMINATION

REQUIREMENTS: **Yellow cover folder BOE 8/15**
A4 drawing sheets (Insert all answer sheets in folder; DO NOT staple)
Hot-rolled structural steel sections BOE8/2

This question paper consists of 4 pages, a diagram sheet of 4 pages, 1 reference schedule and 1 answer sheet

284Q1G2112

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

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COMPUTER-AIDED DRAUGHTING
TIME: 3 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer all the questions.
2. Read all the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Answer QUESTION 5 on the attached ANSWER SHEET.
5. Answer all other questions on A4 drawing sheets. Do NOT use A3 drawing sheets.
6. Only use ONE side of each DRAWING SHEET.
7. Print/Plot each drawing on a separate DRAWING SHEET.
8. Print the QUESTION NUMBER at the top left-hand corner of each sheet.
9. Print/Plot all candidate information in the title block.
10. Provide each drawing sheet with a border line.
11. Draw all drawings to the given scale.
12. Use your own discretion where dimensions are not given.
13. Candidates must plot or print their own drawings.
14. Maintain a balanced layout. Candidates must plan well to earn marks.
15. Insert all DRAWING SHEETS and the ANSWER SHEET in folder BOE8/15. DO NOT staple the sheets.
16. Write neatly and legibly.

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QUESTION 1: ELECTRICAL DRAUGHTING

FIGURE 1, on the DIAGRAM SHEET (attached), shows the layout of an electrical distribution board.

NOTE: Use A4-drawing sheets, PORTRAIT FORMAT and draw a large neat and well-balanced layout of the given diagram. **[15]**

QUESTION 2: BUILDING DRAUGHTING

FIGURE 2, on the DIAGRAM SHEET (attached), shows an incomplete floor plan of a one-bedroom dwelling.

Draw the completed floor plan on A4-drawing sheets, LANDSCAPE ORIENTATED.

NOTE: Use scale 1:100.

2.1 Insert the missing dimensions at A, B, C and D.

2.2 Insert the missing windows and doors.

2.3 Place the kitchen sink in position.

NOTE: The completed drawing must be fully dimensioned and labelled. **[30]**

QUESTION 3: STRUCTURAL STEEL DETAILING

FIGURE 3, on the DIAGRAM SHEET (attached), shows a detail drawing of one of the steel columns to be constructed along the perimeter of a warehouse building. The sheeting rails are attached to rolled steel angle cleats. The column is completed with a cap plate and a base plate.

NOTE: Use scale 1:10 and draw the details of the steel column, the column cap and base plate. Use an A4-drawing sheet, PORTRAIT ORIENTATED. The completed drawing must be fully dimensioned with all the labels included. **[25]**

QUESTION 4: GENERAL AND MECHANICAL DRAUGHTING

FIGURE 4, on the DIAGRAM SHEET (attached), shows the side view of a racing motor bike.

NOTE: Draw the given view on LANDSCAPE ORIENTATED, A4-drawing paper. Scale 1:1. Add FOUR different types of dimensions. **[20]**

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QUESTION 5: COMPUTER ORIENTATION

NOTE: Please use the ANSWER SHEET (attached).

5.1 Using Wi-Fi technology has become most popular amongst cell phone, laptop and tablet users.

State the purpose of a Wi-Fi network. (2)

5.2 Write the words that are represented by the following acronyms:

5.2.1 HTML

5.2.2 HDMI

5.2.3 HDTV

(3 × 1) (3)

5.3 Explain the difference between a *file name* and a *file extension*. (2)

5.4 Name ONE peripheral that can be connected to a computer. (1)

5.5 Explain what is meant by the computer term *firewall.* (2)

[10]

TOTAL: 100

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DIAGRAM SHEET

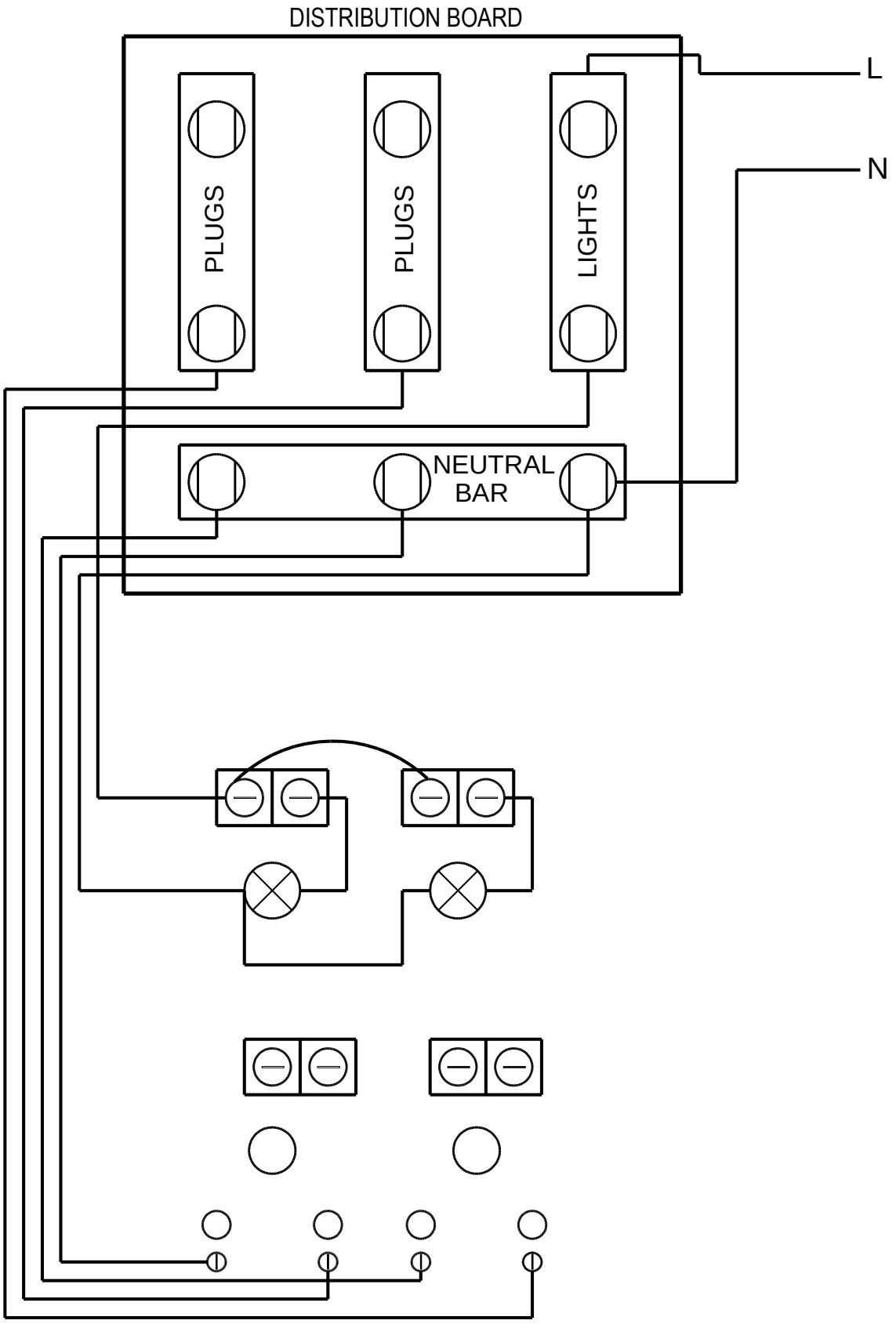


FIGURE 1

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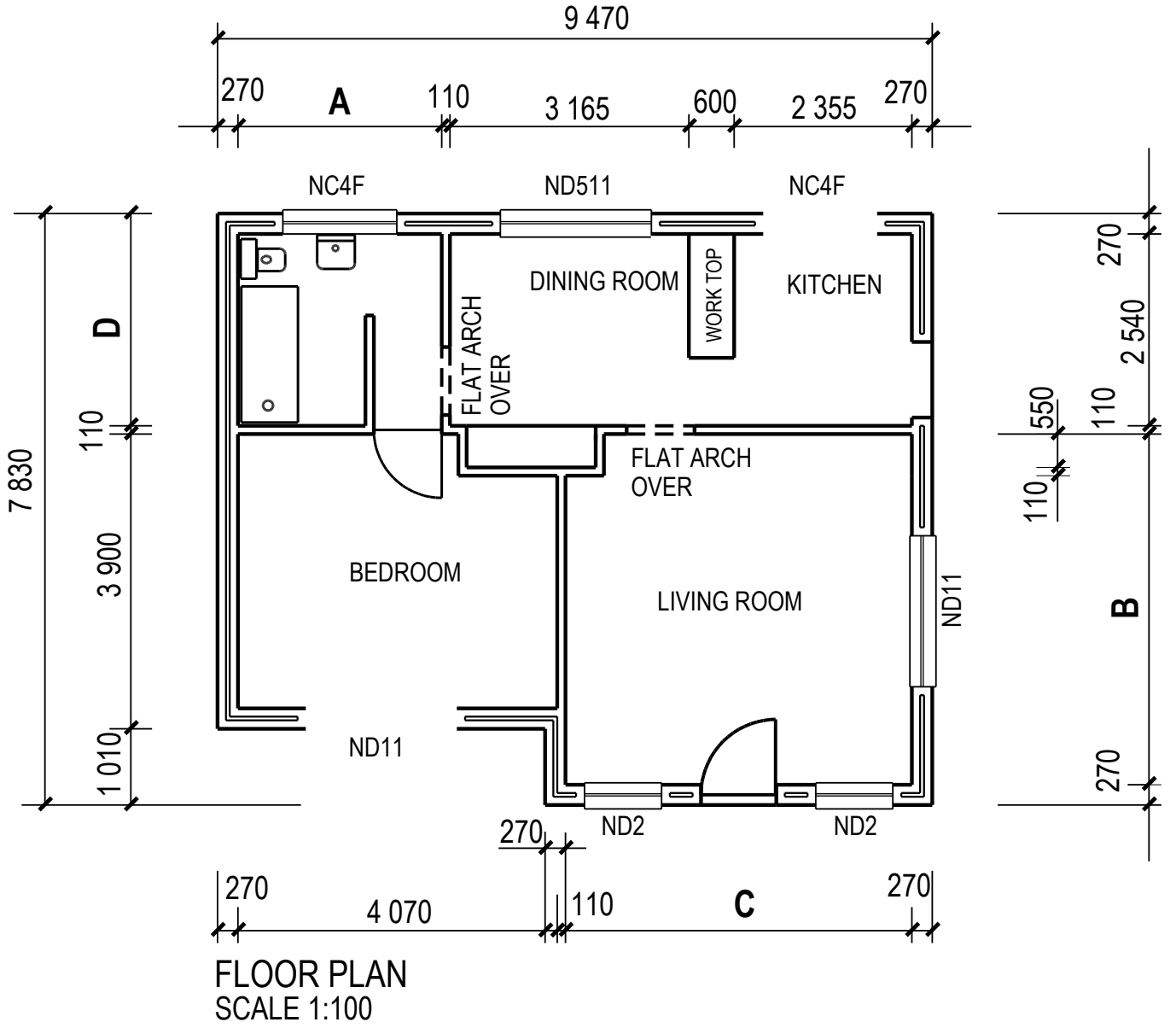


FIGURE 2

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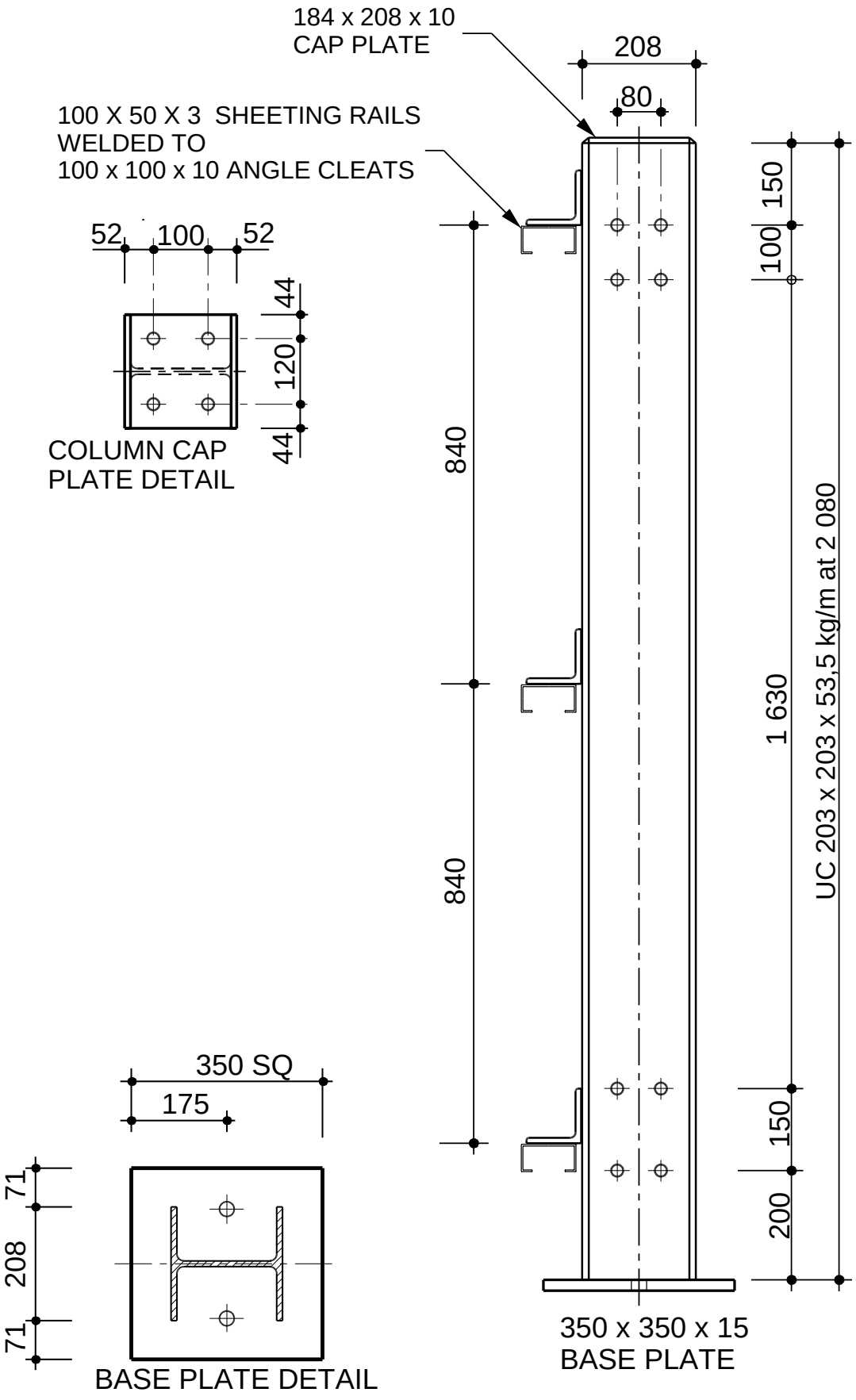


FIGURE 3

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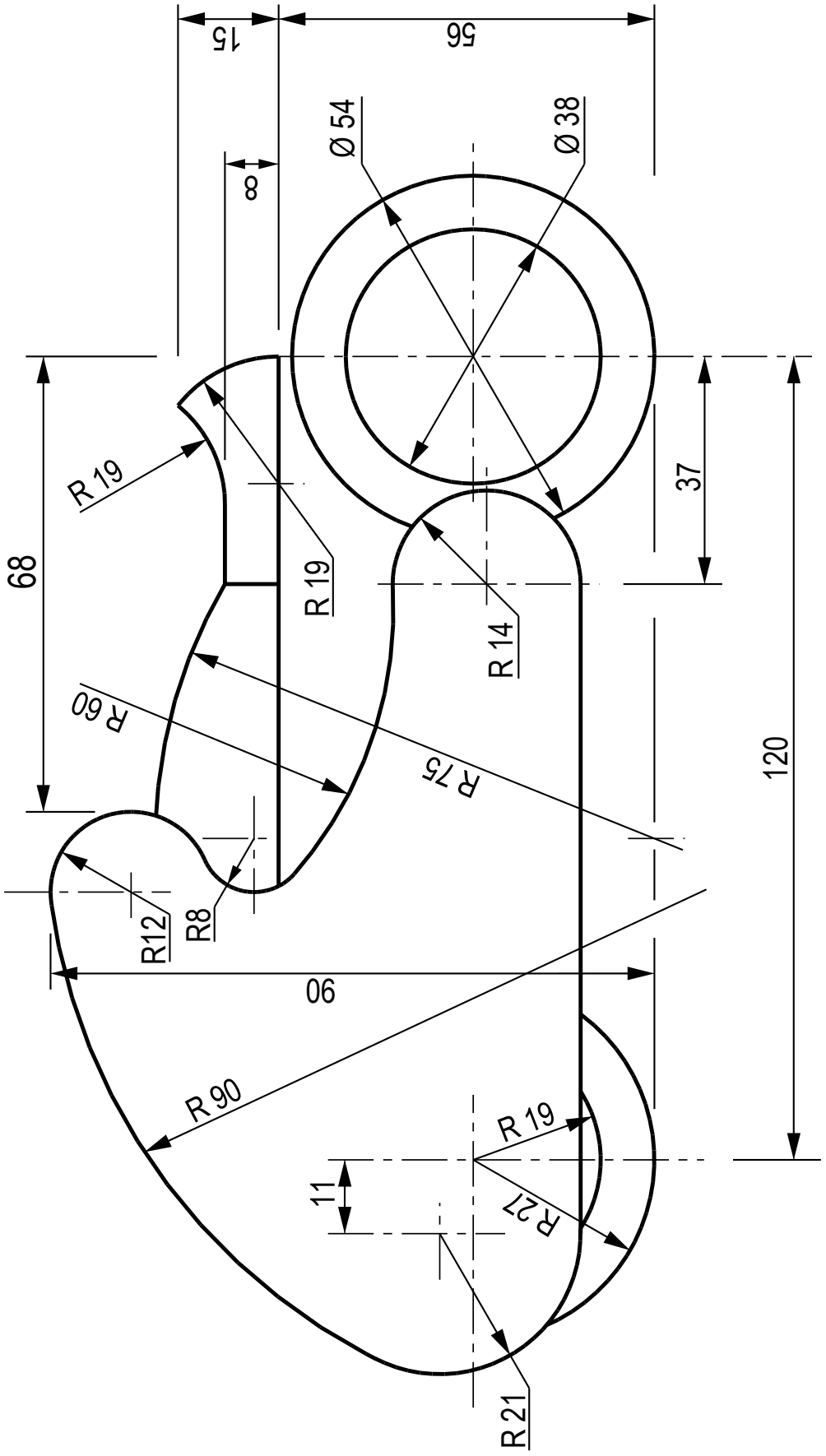
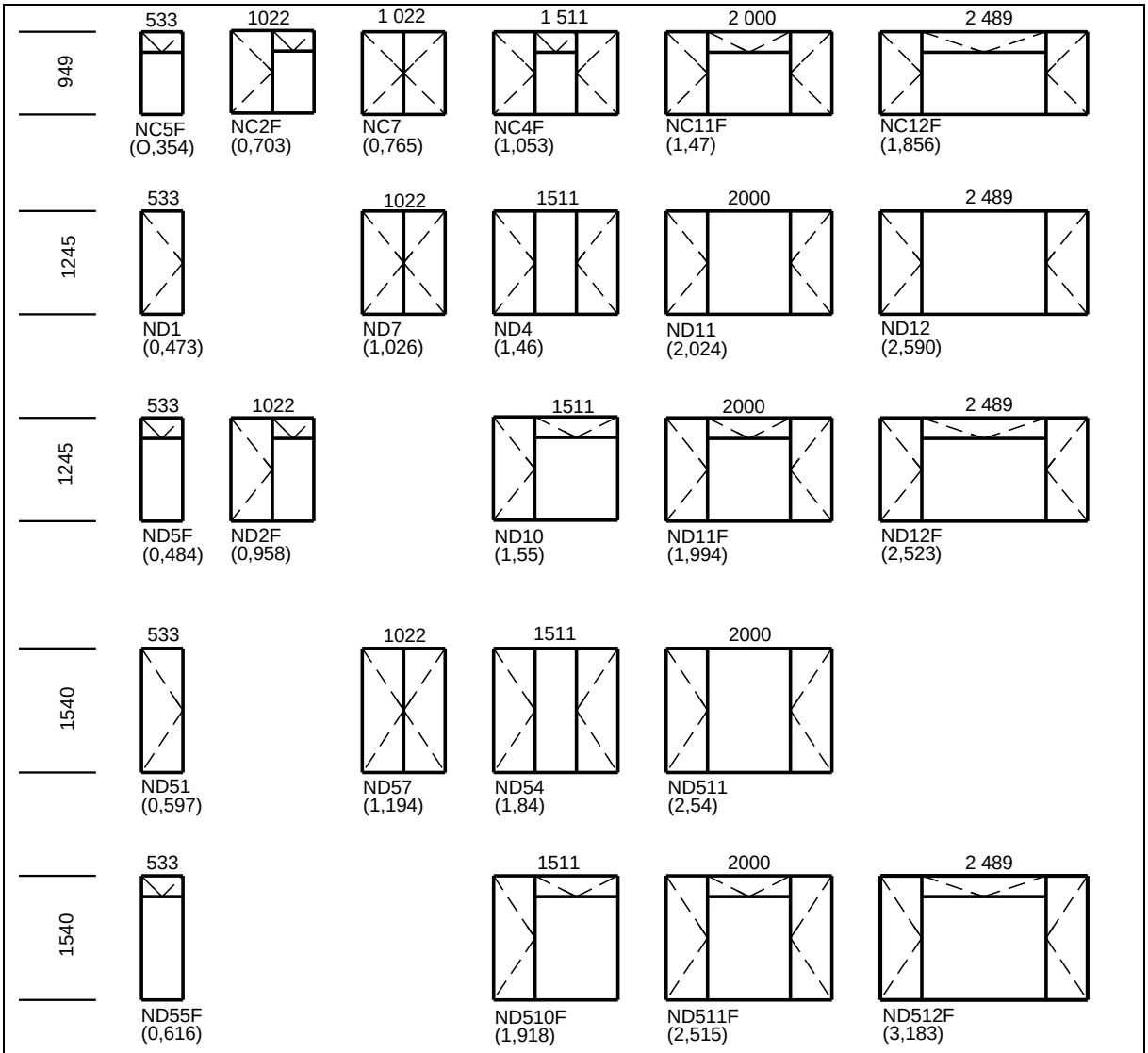


FIGURE 4

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REFERENCE SCHEDULE: STEEL WINDOWS



(Figures in brackets indicate light areas)

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ANSWER SHEET EXAMINATION NUMBER: | | | | | | | | | | | | | |

Candidates may use a pencil or pen.

QUESTION 5

5.1 _____

_____

_____ (2)

5.2 5.2.1 _____

_____

5.2.2 _____

_____

5.2.3 _____

_____

(3 × 1) (3)

5.3 _____

_____

_____ (2)

5.4 _____

_____ (1)

5.5 _____

_____

_____ (2)

[10]

TOTAL: 100

Question 1……../15

Question 2……../30

Question 3……../25

Question 4……../20

Question 5……../10 **TOTAL……./100**

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