higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T1430**(E)**(N17)T

NOVEMBER EXAMINATION

NATIONAL CERTIFICATE

WOODWORKERS' THEORY N1

(11022171)

17 November 2016 (X-Paper)
09:00–12:00

Calculators may be used.

This question paper consists of 5 pages and 3 diagram sheets.

Copyright reserved

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
WOODWORKERS' THEORY N1
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. Drawings must be large, neat and in good proportion.
5. ALL the drawings must be fully labelled.
6. Write neatly and legibly.

Copyright reserved

QUESTION 1: INTRODUCTION TO THE BUILDING INDUSTRY AND PRODUCTIVITY

1.1 Briefly describe the role played by the following stakeholders in the building industry:

1.1.1 Building inspector

1.1.2 Subcontractors

1.1.3 Building contractor

(3 × 1) (3)

1.2 State FOUR mechanical factors that will influence productivity. (4)

1.3 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'true' or 'false' next to the question number (1.3.1–1.3.8) in the ANSWER BOOK.

1.3.1 Roofers are responsible for the fixing of gutters to a roof.

1.3.2 Bricklayers have to make sure that all the pipes are leak-free.

1.3.3 Carpenters install, repair and maintain sheet-metal flashings.

1.3.4 The shop-fitters ensure that the ceilings are well decorated.

1.3.5 Plumbers build fireplaces, chimneys and garden walls.

1.3.6 The tiler fits and hangs doors, including locks.

1.3.7 The plasterer is a person who specialises in the installation and repair of pipes used to carry water.

1.3.8 The joiners are based in the workshop.

(8 × 1) (8)

[15]

QUESTION 2: SAFETY AND HOUSEKEEPING

2.1 State FIVE occupational safety measures that must be followed in the workshop. (5)

2.2 Name THREE items of personal protective equipment (PPE) that protect the eyes. (3)

2.3 Why is discipline so essential in the woodwork workshop? (2)

2.4 Explain FIVE ways in which accidents can be prevented in a workplace. (5)
[15]

QUESTION 3: TIMBER, TIMBER PRODUCTS, METAL AND GLASS

3.1 Describe the uses of the following kinds of timber:

3.1.1 South African Pine

3.1.2 Saligna

(2 × 1) (2)

3.2 Name FIVE types of timber defects and give the cause of each of them. (10)

3.3 Name TWO methods of seasoning timber and also give ONE disadvantage of each method. (4)

3.4 Give TWO requirements for any drying shed. (2)

3.5 Name any TWO types of glass used in the building industry. (2)
[20]

QUESTION 4: TOOLS AND MACHINES

4.1 List FOUR different types of discs that can be fitted on an angle grinder for different tasks. (4)

4.2 A carpenter or woodworker always uses the gauge as a marking tool.

Name THREE main types of gauges. (3)

4.3 Identify the hammers on DIAGRAM SHEET 1 (attached). Write the name of the hammer next to the question number (4.3.1–4.3.4) in the ANSWER BOOK. (4)

4.4 Identify the pliers on DIAGRAM SHEET 2 (attached). Write the name of the pliers next to the question number (4.4.1–4.4.4) in the ANSWER BOOK. (4)
[15]

QUESTION 5: FIXATIVES, GLUE AND FITTINGS

5.1 Identify the articles on DIAGRAM SHEET 3 (attached). Write the name of the article next to the question number (5.1.1–5.1.9) in the ANSWER BOOK. (9)

5.2 State THREE disadvantages of using epoxy resin adhesives. (3)

5.3 Name THREE different types of screw heads that you know. (3)
[15]

QUESTION 6: JOINTS

Name TEN different types of joints that are used in the woodworking industry. **[10]**

QUESTION 7: BUILDING-RELATED CALCULATIONS

7.1 A sample of timber weighs 350 g. After oven-drying to a constant weight, it weighed 290 g.

Determine the percentage moisture content of the sample. (3)

7.2 To build a garden wall, a bricklayer quoted R6 400,00. This comprises 45% for labour and 38% for material.

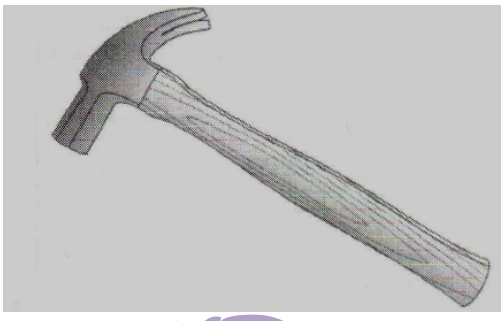
What is the amount paid for the material and what was the profit of the bricklayer for the job? (7)
[10]

TOTAL: 100

Copyright reserved

DIAGRAM SHEET 1

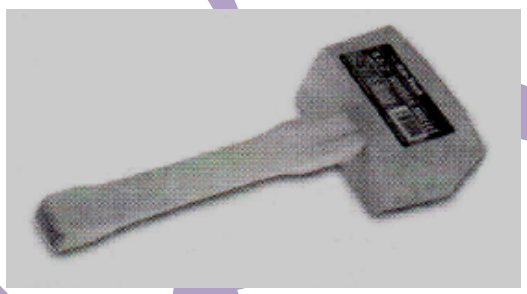
4.3 4.3.1



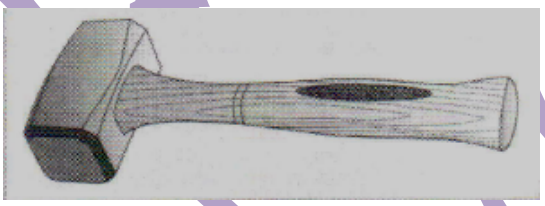
4.3.2



4.3.3



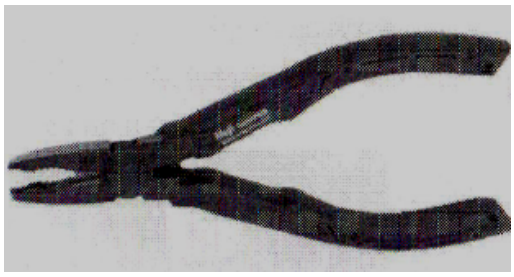
4.3.4



Copyright reserved

DIAGRAM SHEET 2

4.4 4.4.1



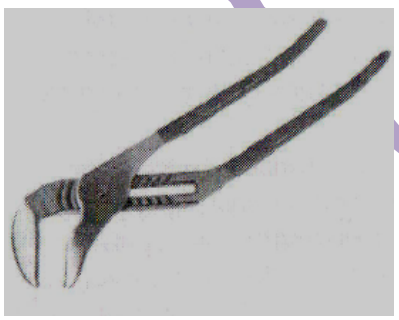
4.4.2



4.4.3



4.4.4



Copyright reserved

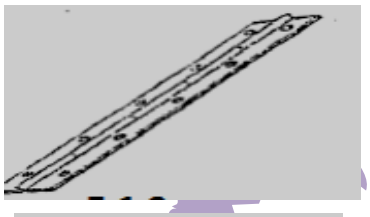
DIAGRAM SHEET 3

5.1

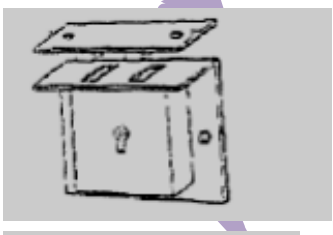
5.1.1



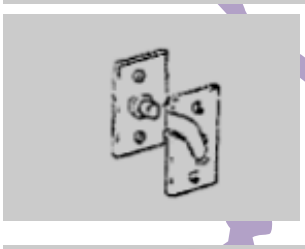
5.1.2



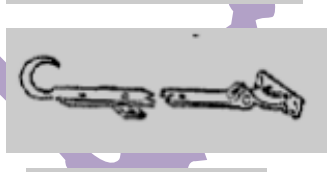
5.1.3



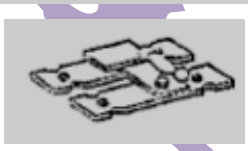
5.1.4



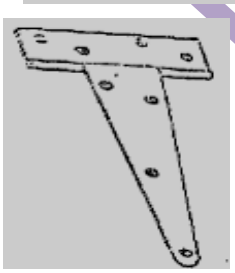
5.1.5



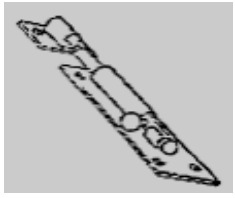
5.1.6



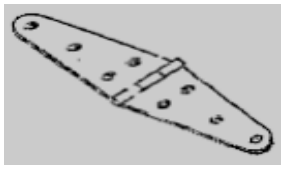
5.1.7



5.1.8



5.1.9



Copyright reserved