higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

WOODWORKERS' THEORY N1

(11022171)

29 November 2023 (X-paper)
09:00–12:00

Drawing instruments and nonprogrammable calculators may be used.

This question paper consists of 7 pages.

163Q1E2329

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
WOODWORKER'S 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. Use only a black or blue pen.
5. Drawings must be neat, reasonably large and must be done in pencil.
6. Write neatly and legibly.

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QUESTION 1

1.1 Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (1.1.1–1.1.10) in the ANSWER BOOK.

1.1.1 A plumber must see to it that valves and stop cocks are in accessible places.

1.1.2 A carpenter is based on a building site, whereas a joiner is based in a workshop.

1.1.3 An architect performs the actual construction of a building according to a plan.

1.1.4 A client or owner manages and controls the building costs.

1.1.5 Productivity has a major influence on any construction company.

1.1.6 A decorator checks that sawdust and any particles are removed from the bricks.

1.1.7 A plasterer also applies a smooth layer of screed on a concrete floor.

1.1.8 A wood machinist works in a workshop where all the wood is spread out for joiners or cabinetmakers to assemble.

1.1.9 A bricklayer is a tradesperson whose main purpose is to create the structural core of a building.

1.1.10 A roofer must check that all ground-floor timbers are clear of walls.

(10 × 1) (10)

1.2 Briefly define the term *productivity.* (2)

1.3 Name THREE main functions of trade organisations. (3)

[15]

QUESTION 2

2.1 Define the term *accident*. (2)

2.2 Why is housekeeping important and useful? (4)

2.3 Name TWO types of Personal Protective Equipment and their applications. (4)

2.4 List FIVE safety measures to take into consideration before you use electric appliances. (5)

[15]

QUESTION 3

3.1 Briefly explain the following parts of a tree trunk:

3.1.1 Pith

3.1.2 Sapwood

3.1.3 Bark

(3 × 3) (9)

3.2 Name FOUR elements of a drying kiln. (4)

3.3 Lists THREE uses of water-resistant chipboard in a building. (3)

3.4 Briefly explain the causes of star shakes. (2)

3.5 Name TWO types of special-purpose plastics. (2)

[20]

QUESTION 4

4.1 Identify each type of tool shown below by writing the answer next to the question number (4.1.1–4.1.10) in the ANSWER BOOK.



4.1.1



4.1.2



4.1.3



4.1.4



4.1.5



4.1.6



4.1.7



4.1.8



4.1.9



4.1.10

(10 × 1) (10)

4.2 Briefly explain the difference between the following:

4.2.1 Marking gauge (2)

4.2.2 Mortise gauge (3)

[15]

QUESTION 5

5.1 Identify each type of fixative shown below by writing the answer next to the question number (5.1.1–5.1.5) in the ANSWER BOOK.



5.1.1



5.1.2



5.1.3



5.1.4



5.1.5

(5 x 1) (5)

5.2 Metal connector plate is used to produce rigid, distortion-free joints of a strength greater than any other form of timber jointing.

Name any TWO types of connector plates. (2)

5.3 Name FIVE advantages of water-based glue. (5)

5.4 Gate latches are surface-mounted fittings used to keep gates and doors shut.

Name THREE types of latches you are familiar with. (3)

[15]

QUESTION 6

6.1 Draw neat isometric views to show the difference between the following:

6.1.1 Housing joint

6.1.2 Dovetail halving joint

(4 × 2) (8)

6.2 Name TWO types of joints used to increase the width of the timber. (2)

[10]

QUESTION 7

The table below indicates tasks performed by different artisans in a building.

Calculate each artisan's cost and total cost for the work done and write the amount next to the question number (7.1–7.10) in the ANSWER BOOK.

ARTISANS	TOTAL HOURS	RATE PER HOUR	ARTISAN COST	MATERIAL COST	TOTAL COST
Carpenter	4 hrs	R32,20	7.1	R689,30	7.6
Joiner	33 hrs	R45,56	7.2	R1 050,10	7.7
Wood machinist	16 hrs	R102,10	7.3	R820,80	7.8
Roofer	72 hrs	R28,90	7.4	R1 035,15	7.9
Shopfitter	6 hrs	R75,30	7.5	R596,98	7.10

(10 x 1) **[10]**

TOTAL: 100

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