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higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

WOODWORKERS' THEORY N1

(11022171)

13 April 2021 (X-paper)
09:00–12:00

Nonprogrammable calculators may be used.

This question paper consists of 6 pages.

161Q1A2113

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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. Start each question on a new page.
5. Use only a black or blue pen.
6. Write neatly and legibly.

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QUESTION 1

1.1 Name the building tradesperson or building professional responsible for each of the following construction works:

1.1.1 Ensures that water-pipe joints are watertight

1.1.2 Ensures that joists are spaced according to specification

1.1.3 Ensures that coats are sufficient to ensure that water does not affect timber doors

1.1.4 Ensures that cavity walls are not affected by mortar droppings

1.1.5 Ensures that trusses are properly spaced on walls

(5 × 1) (5)

1.2 Name SIX areas where productivity can be improved. (6)

1.3 Define the term *multistorey building*. (4)

[15]

QUESTION 2

2.1 Write each of the following abbreviations in full:

2.1.1 NOSA

2.1.2 SWL

2.1.3 COIDA

2.1.4 OHSA

2.1.5 PPE

(5 × 1) (5)

2.2 Differentiate between an *accident* and an *incident*. (2)

2.3 Name FOUR factors that might increase the risk of back injury. (4)

2.4 Briefly explain machine safeguarding. (4)

[15]

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QUESTION 3

3.1 Name FOUR causes of timber deterioration. (4)

3.2 List FOUR characteristics of copper. (4)

3.3 List FIVE types of standard boards. (5)

3.4 Give FOUR uses of aluminium in the construction industry. (4)

3.5 Give ONE use of each of the following plastics:

3.5.1 Polyvinyl chloride (PVC)

3.5.2 Polypropylene (PP)

3.5.3 Polycarbonate (PC)

(3 × 1) (3)

[20]

QUESTION 4

4.1 Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (4.1.1–4.1.5) in the ANSWER BOOK.

4.1.1 A German jack plane (scrubbing plane) is used to take off the rough surfaces of timber.

4.1.2 A keyhole saw is useful for cutting out or cleaning out keyholes.

4.1.3 A mitre square is used for marking and testing angles of 45°.

4.1.4 A mallet is used to drive nails out during roof constructions.

4.1.5 A screwdriver is used to loosen and tighten screws and bolts with slotted heads.

(5 × 1) (5)

4.2 Name THREE types of saws that can cut curved surfaces. (3)

4.3 Give FIVE uses of portable drilling machines. (5)

4.4 Give ONE use of each of the following tools:

4.4.1 Brace

4.4.2 Hand drill

(2 × 1) (2)

[15]

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QUESTION 5

5.1 Identify the fixing tools below by writing the name of each tool next to the question number (5.1.1–5.1.9) in the ANSWER BOOK.

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

(9 × 1) (9)

5.2 Name SIX types of air-powered hand tools used in the construction industry. (6)

[15]

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QUESTION 6

Choose a description from COLUMN B that matches a term in COLUMN A. Write only the letter (A–L) next to the question number (6.1–6.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
6.1	Dovetail joints	A	one of the strongest methods for joining two pieces of wood
6.2	Glue blocks	B	always placed out of sight
6.3	Housing joints	C	used in high-class furniture and cabinets
6.4	Framing	D	used to terminate or change direction of the timber
6.5	Lengthening, widening and framing	E	categories of woodworking joints
6.6	Bridle joints	F	solid, strong and versatile
6.7	Mitre joints	G	boards of the same thickness
6.8	Mortise and tenon joints	H	used for rails to legs in cabinet work
6.9	Tongue-and-groove-joints	I	typical butt joint
6.10	Finger joints	J	obtained by cutting two pieces of timber at an angle of 45°
		K	used to lengthen timber boards
		L	also known as dry jointing

(10 × 1) **[10]**

QUESTION 7

A carpenter submits a quotation of R7 000 to fit cabinets for a library at a local school. The quotation is made up of 40% for materials and 50% for labour.

Calculate the:

7.1 Cost of material (3)

7.2 Labour cost (3)

7.3 Profit made by the carpenter for the job (4)

[10]

TOTAL: 100

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