higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

WOODWORKERS' THEORY N1

(11022171)

3 August 2021 (X-paper)
09:00–12:00

Nonprogrammable calculators may be used.

This question paper consists of 6 pages.

171Q1G2103

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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. Sketches must be large, neat and fully labelled.
5. Start each question on a new page.
6. Use only a black or blue pen.
7. Write neatly and legibly.

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QUESTION 1: INTRODUCTION TO THE BUILDING INDUSTRY AND PRODUCTIVITY

1.1 Choose an item from COLUMN B that matches a description in COLUMN A. Write only the letter (A–D) next to the question number (1.1.1–1.1.4) in the ANSWER BOOK.

COLUMN A		COLUMN B	
1.1.1	This body was set up to register contractors and construction projects	A	Engineering Council of South Africa
1.1.2	Upholds its members' reputation and ensures that members maintain high standards	B	National Home Builders Registration Council
1.1.3	The main focus is to protect the interests of the homeowner and to protect the builder from unreasonable clients	C	Construction Industry Development Board
1.1.4	Provides a code of conduct for engineers and guidelines for fees for engineering consulting work	D	Master Builders Association

(4 × 1) (4)

1.2 Briefly explain what a *cash flow* is. (2)

1.3 Give FOUR examples of expenditure. (4)

1.4 Quantity surveying is one of the stakeholders involved in building projects.

Name FIVE other stakeholders. (5)

[15]

QUESTION 2: SAFETY AND HOUSEKEEPING

2.1 The Occupational Health and Safety Act (85 of 1993) was amended by the Occupational Health and Safety Amendment Act (181 of 1993).

Name TWO aims of this act. (2)

2.2 State THREE safety precautions for using ladders. (3)

2.3 Give FOUR reasons why accidents are sometimes not reported. (4)

2.4 List THREE types of personal protective equipment and their applications. (6)

[15]

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QUESTION 3: TIMBER, TIMBER PRODUCTS, METALS AND GLASS

3.1 Indicate whether the following statements regarding plastic in the building industry are TRUE or FALSE by writing only 'True' or 'False' next to the question number (3.1.1–3.1.5) in the ANSWER BOOK.

3.1.1 Melamine formaldehyde is used to decorate the top surface of paper laminates.

3.1.2 Phenolic is used for insulating parts in electrical fixtures.

3.1.3 Urea-formaldehyde is used as a wood adhesive for plywood.

3.1.4 Polyvinyl chloride is used for security windows and traffic lights.

3.1.5 Plastic thermal insulation panels are used to protect buildings from weather damage.

(5 × 1) (5)

3.2 Give FOUR advantages of hardwood. (4)

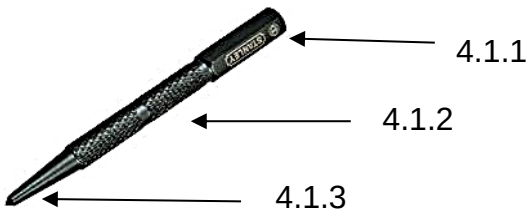
3.3 Name FIVE types of steel in ferrous metal. (5)

3.4 Why must timber be seasoned? (6)

[20]

QUESTION 4: TOOLS AND MACHINES

4.1 Identify the parts of the nail punch by writing only the name of each part next to the question number (4.1.1–4.1.3) in the ANSWER BOOK.



(3)

4.2 State THREE safety measures to observe when working with pneumatic staplers. (3)

4.3 List FOUR of the most important flat chisels in the building industry. (4)

4.4 Name FIVE saws used to cut straight surfaces either with or against the grain. (5)

[15]

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QUESTION 5: FIXATIVES, GLUES AND FITTINGS

5.1 Give FOUR examples of each of the following fittings in furniture:

5.1.1 Locks

5.1.2 Catches

(2 × 4) (8)

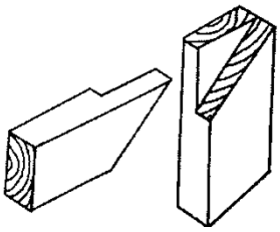
5.2 Give FIVE advantages of water-based glue. (5)

5.3 Briefly explain the use of a cartridge nail gun. (2)

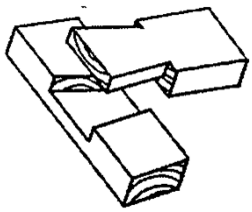
[15]

QUESTION 6: JOINTS

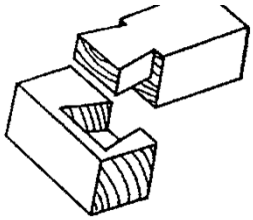
Name each of the following joints commonly used in woodwork. Write only the answer next to the question number (6.1–6.10) in the ANSWER BOOK.



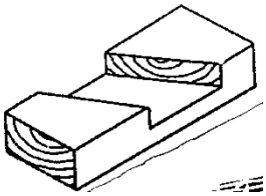
6.1



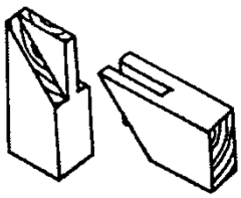
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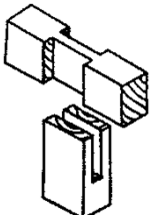
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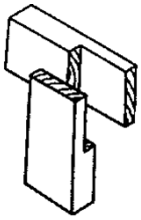
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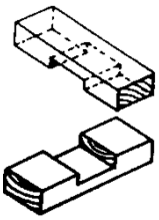
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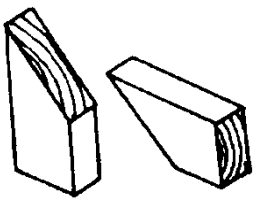
6.6



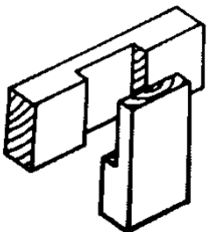
6.7



6.8



6.9



6.10

[10]

QUESTION 7: BUILDING-RELATED CALCULATIONS

Mr Jacob wants to tile his room of 7,50 m × 3,30 m with marble tiles. He asks you to help him. The size of each tile is 200 mm × 200 mm.

7.1	Calculate the area of the room.	(1)
7.2	Calculate the area of one tile (answer in m^2).	(1)
7.3	Calculate the total number of tiles required.	(4)
7.4	If one box of tiles holds 1 m^2 of tiles, how many boxes of tiles must be bought?	(4)
		[10]

TOTAL: 100

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