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higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

WOODWORKERS' THEORY N1

5 APRIL 2018

This marking guideline consists of 6 pages.

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QUESTION 1: INTRODUCTION TO THE BUILDING INDUSTRY AND PRODUCTIVITY

1.1 A measure of efficiency of production✓ which can be interpreted as a ratio of production output to what is required to produce it (inputs)✓ (2)

1.2
- Lack of ability
- Lack of training
- Poor planning on work
- Lack of knowledge
- Poor motivation
- Lack of education (Any 4 × 1) (4)

1.3 1.3.1
- Ensure that glass is fitted and without flaws.
- Ensure that glass is properly back puttied and cleaned off.
- Ensure that glass is fitted to large openings according to SABS specifications.
- Whenever glass is fitted above one storey a proper fan guard covered with hessian-based linings must be in place.

(Any THREE)

1.3.2
- Check that tiles or slates are quality specified.
- Check that battens are free of knots.
- Note that the tile gauge is no longer than specified.
- Check that the correct amount of nailing is being done.
- Ensure that the tile rows are tied down by wire as specified.
- Ensure that the hips and ridges are thoroughly blended.

(Any THREE)

1.3.3
- Ensure that all pipes are clear of outside walls.
- Ensure that valves and stop cocks are in accessible places.
- Ensure that all water pipe joints are water tight.
- Ensure that all water pipes are rinsed before put into use.

(Any THREE)
(3 × 3) (9)
[15]

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QUESTION 2: SAFETY AND HOUSEKEEPING

2.1
- Accident response
- Accident investigation
- Corrective action (3)

2.2
- Use as instructed.
- Return it to its proper storage after used.
- Report any defects or other problems promptly.
- Maintain it in a state of good repair. (4)

2.3
- All floor openings must be enclosed with suitable guards or rails.
- A catch net or platform must be erected over an entrance or passageway, where employers and the public pass on a construction site.
- When work is carried out at a height of more than 2 meters above the ground, toe boards of at least 100 mm high should be fitted in such a way that no open space exists between the boards and the floor level. (3)

2.4
- Making any recommendations regarding health and safety in the workplace
- Discussing any incident at the workplace verbally or in writing with an inspector
- Keeping record of all recommendations and reports
- Establishing and maintaining the existence of such committee
- Ensuring that there is full compliance with the steps laid out by the employer (5)

[15]

QUESTION 3: TIMBER, TIMBER PRODUCTS, METAL AND GLASS

3.1
3.1.1 True
3.1.2 False
3.1.3 True
3.1.4 False
3.1.5 False

(5 × 1) (5)

3.2
- Low-carbon steel
- Medium-carbon steel
- High-carbon steel (3)

3.3
- This method does not cause case-hardening.
- All thickness of timber can be dried.
- The wood crack shrinks and warps less.
- There is less risk of damage to the wood.
- No expensive buildings or apparatus are necessary. (Any 4 × 1) (4)

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3.4
- In a room or area situated below ground level
- Behind and under sinks and baths
- Above any defective damp-proof course or membrane
- On timber in permanent contact with the ground
- In areas where water can creep by means of capillarity
- Behind damaged paintwork
- Under window sills and thresholds (Any 3 × 1) (3)

3.5
- By dealing with any sources of defects responsible for dampness
- By removing and safely disposing of all affected timber
- Cutting back well into sound wood
- By drying out the building
- Ensuring that all replacement timber has below 20% moisture content
- Treated with a creosote oil preservative
- Where there is a risk that the timber may not be kept dry, a suitable wood preservative should be applied to timber at risk
- Attention should be given to the end grain or, alternatively, use pretreated timber (Any 5 × 1) (5)

[20]

QUESTION 4: TOOLS AND MACHINES

4.1
- Oil stone
- Grindstone
- Slip stone
- Saw file
- Needle file (Any 3 × 1) (3)

4.2
- Keep the chuck clean.
- Avoid over-tightening when inserting a bit – the strain could cause excessive wear of the working parts.
- Lubricant oil will keep handles moving freely.
- Keep dust away from the gear wheel and pinion. (4)

4.3 4.3.1 Used for cutting thinner and lighter wood across the grain✓ and for cutting plywood and large tenons✓

4.3.2 Used for cross-cutting tenons, mouldings✓ and for sawing trenches for book shelves✓

4.3.3 Used for cutting shapes and contours✓ and to shape the ends of moulding joints✓

4.3.4 Mainly used for cutting hard and soft metals✓ and plastic pipes✓

(4 × 2) (8)

[15]

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QUESTION 5: FIXATIVES, GLUES AND FITTINGS

5.1
- It is ready for use when purchased.
- Hardening occurs within 3 to 4 hours.
- No process acceleration needed.
- Surplus glue can be wiped off with a wet cloth.
- It has a long shelf life. (Any 4 × 1) (4)

5.2 5.2.1 Floor nails are rectangular with an L-shaped head and are used mainly for nailing floorboards to joists.✓ Floor nails are cut from sheets of metal and have a strong holding-down strength.✓ The sizes range from 25–50 mm.✓

5.2.2 Clout nails are made of galvanised steel. It has a wide flat head and a short shank.✓ It is most suitable for soft materials such as plaster ceiling boards and roof felt.✓ It is also used to nail thin fibre cement sheeting to the underside of eaves.✓

(2 × 3) (6)

5.3 5.3.1 Bow
5.3.2 Collar
5.3.3 Pin
5.3.4 Ward notch/Biting
5.3.5 Shank

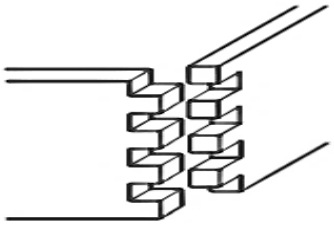
(5 × 1) (5)
[15]

QUESTION 6: JOINTS

6.1 6.1.1 Feather and groove joint
6.1.2 Corner bridle
6.1.3 Mitre joint
6.1.4 Triangular glue block
6.1.5 Butt or rubbed joint

(5 × 1) (5)

6.2



MARKS ALLOCATION	
Correct interpretation	2
Drawing of the joint	2
Neatness	1
TOTAL:	**5**

(5)
[10]

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QUESTION 7: BUILDING-RELATED CALCULATION

7.1 Cost of laminated boards:

R120,50 per m^2 × 14 m^2
= R1 687,00✓✓ (2)

7.2 Cost to do work:

R85,00 + R12,00 per hour = R97,00✓✓

R97,00 × 15 hours = R1 455,00✓✓ (4)

7.3 R1 687,00 + R1 455,00 + R77,56 = R3 219,56✓

Percentage profit 25% = R3219,56 × 0,25% = R804,89✓

Total price of the dressing table: R3 219,56 + R804,89 = R4 024,45✓✓ (4)
[10]

TOTAL: 100

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