

NAMIBIA SENIOR SECONDARY CERTIFICATE

METALWORK AND WELDING ORDINARY LEVEL

6188/2

PAPER 2 Practical Examination

2022

INSTRUCTIONS TO SUBJECT TEACHERS

This document consists of **10** printed pages and **2** blank pages.



Republic of Namibia

MINISTRY OF EDUCATION, ARTS AND CULTURE

Instructions for the Metalwork and Welding Practical Examination Invigilator

A Assistance to candidates

The purpose of the Metalwork and Welding practical examination is to assess the candidates' ability to apply their skills related to practical work. This is done by requesting the candidates to perform practical skills in the workshop. Therefore, the candidates' ability to do practical work should not be hindered by the failure of tools, machines and materials. In order to overcome difficulties that candidates might experience during the practical examination, the invigilator should (or allow the Metalwork and Welding teacher to) assist candidates in cases where equipment is malfunctioning or materials are not giving the expected results. Teachers should test the equipment like tools and machines regularly in advance.

The following regulations must be strictly adhered to.

- Candidates will wear approved Personal Protective Equipment (PPE) for the duration of the test.
- The use of cell phones are strictly prohibited.
- A candidate who is unable to proceed and require assistance must inform the invigilator and state the difficulty.
- A report must be written of any assistance given to a candidate with the Candidate Name and Candidate Number.
- The test may be terminated by the invigilator if candidate demonstrates a lack of competency that may result in physical injury or mechanical damage.
- No assistance may be announced to the whole class.
- Candidate will clean work area, tools and equipment after completion of tasks.
- Candidate will return tools and equipment after use.

B Number of sets of tools and machines

Each work station should have enough equipment for one candidate at the beginning of each practical session. Candidates are not allowed to share equipment unless stated differently in the equipment list. It is advisable to have a few spare sets to avoid candidates from being delayed due to disfunctional equipment.

Part: A

Learners should create a kiddies stool with square tube, mild steel sheet and flat bar that could be used for children to sit on outdoors.

- 1 State **one** type of possible joining method that could be used to attach the top to the frame.. [1]
- 2 List **two** suitable cutting tools that will be used in the manufacturing process. [2]
- 3 List **one** safety precaution regarding tools/equipment when welding. [1]
- 4 Name a suitable tool that will be used to remove sharp corners and edges. [1]

[5]

Part: B

Practical (the making of the product/artefact)

Study the attached drawing and specifications carefully. Use square tubing, mild steel sheet, flat bar and the appropriate tools provided to make the kiddies stool.

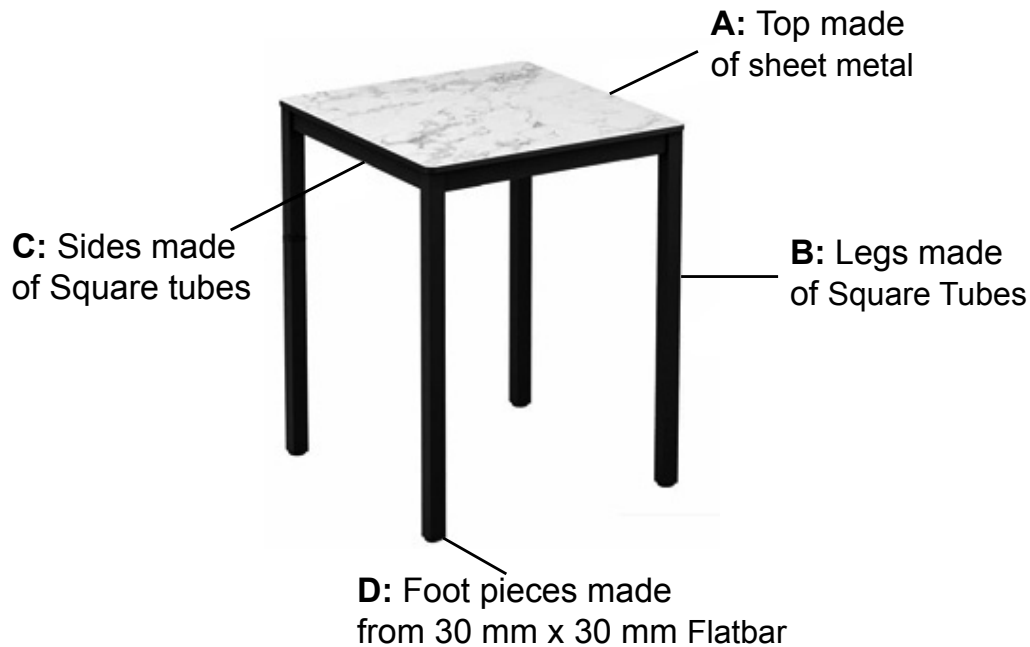


Fig. 1

Specifications

Materials per learner:

All dimensions are in (mm)

Quantity	Material	Dimensions
4 x	Square tube for the legs	L=350 x W=25x25 x 2
4 x	Square tube for the sides	L=180 x W=25x25x2
1 x	Mild steel sheet for the top:	L=230 x W=230 x2
4 x	Flat bar for the foot piece	L=30 x B=30 x =2

Tools needed:

- Hacksaw
- Measuring tape
- Engineers square
- Drill bits 2 mm to 18 mm
- Drill machine
- Angle Grinder with grinding and cutting disc
- Arc welding machine
- Scriber
- Pop rivet gun with pop rivets

Evaluation Indicators	Mark
Preparation of work pieces	10
Interpretation of drawings/specifications	5
Safe handling of tools and equipment	5
Proper use of tools and equipment	5
Safety precautions	5
Accuracy and quality of work/product	10
Total	40

PART B: Practical assessment criteria

Assessment Objectives	Level of Response	Mark Range	Max. Mark
2 Interpretation of data	Limited understanding and inaccurate result of the item made.	0-1	5
	Partial understanding of the specifications given but not producing an accurate item.	2-3	
	Excellent understanding of the specifications given and producing an accurate item.	4-5	
3 Practical skills Marking out	Poor marking out skills, not using the correct tools.	0-1	5
	Moderate marking out skills, using the correct tools incorrectly.	2-3	
	Excellent marking out skills, using all tools correctly.	4-5	
4 Practical skills Safe working	Applying the safety measures using tools.	0-1	5
	Applying some safety rules, but still with the risk of injuries.	2-3	
	Applying all safety rules and works without risk.	4-5	
5 Practical skills Correct use of tools	Not using the tools in the correct manner.	0-1	5
	Using tools as they should be, but lacks the skill to do it correctly'	2-3	
	Uses all tools correctly.	4-5	
6 Practical skills Join Part A to B	Joint is not according to the specifications given.	0-1	5
	Joint is correct according to measurements given, but is inaccurate more than a millimeter and fits too loosely or cannot be assembled.	2-3	
	Joint is accurate and has a snug fit.	4-5	
Practical skills Join Part A and C	Joint is not according to the specifications given.	0-1	5
	Joint is correct according to measurements given, but is inaccurate more than a millimeter and fits too loosely or cannot be assembled.	2-3	
	Joint is accurate and has a snug fit.	4-5	

7 Accuracy and quality of products	Joints are not according to the specifications given.	0-1	5
	Joints is correct according to measurements given, but is inaccurate more than a millimeter and is not cut straight.	2-3	
	Joints is accurate and has a smooth finish	4-5	
8 Safety precautions	Wearing protective clothes.	0-1	5
	Correct use of tools and machines	2-3	
	Storing tools correctly.	4-5	

Part: C

Reflection

- 1 (a) List **one** other material that could you have been used for the foot pieces of the stool if you did not have flat bar available? [1]
- (b) Mention **two** types of suitable finishing methods that could be applied to the stool. [2]
- (c) Explain the purpose of the foot pieces made of flat bar. [2]
- [50]**

Each candidate should answer question 1 (a), (b) and (c):

REPORT FORM
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PAPER 2 Practical Examination

Question Paper & Examination Security Declaration

Region.....Date.....

Centre Number.....Centre Name.....

Principal (full name, print).....

Head of Examination Centre (full name, print).....

Hereby it is certified that this examination was conducted under appropriate measures and conditions as stipulated in the 'Rules & Regulations for the NSSC Examinations'.

Attached are the following details;

1 Subject Teacher's Results

*Please submit details of the readings obtained in **Part B** on a Metalwork and Welding Practical examination assessment summary form showing the candidate's information.*

*It is essential that each packet of candidates' scripts contains a copy of the applicable **Subject Teacher's Results** as the candidates' work cannot be assessed accurately without such information.*

2 The Candidate Numbers of candidates attending each session were:

Please write them in their sitting order.

First Session	Second Session	Third Session

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