



Technical, Entrepreneurship and Vocational Education and Training Authority (TEVETA)

MACHINING

TRADE TEST LEVEL 1

Record of Practical Assessment

Learner`s name:_____

Learner`s NRC no.:_____

Learner`s TEVETA No.:_____

Institution Name:_____

Institution TVA No.:_____

Assessment Period:_____

PREFACE

The Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) is an institution created under the Technical Education, Vocational and Entrepreneurship Training Act Number 13 of 1998, as amended by the Technical Education, Vocational and Entrepreneurship Training (Amendment) Act Number 11 of 2005.

The Act among other things provides that TEVETA shall:

- (a) regulate and conduct national examinations and assessments relating to technical education, vocational and entrepreneurship training;
- (b) charge and collect fees in respect of examinations, assessments and other services provided by the Authority;
- (c) award certificates to persons who succeed in examinations and assessments undertaken under this Act
- (d) do all such things connected with or incidental to the functions of the Authority under this Act.

Through this mandate, the Assessment and Qualifications Division of TEVETA has developed Practical Assessment Tool Kits to enable learners achieve the competences that are congruent with the demand of the workplace tasks. These tool kits in part are also intended to ensure that similar conditions under which all students in TEVET are assessed and examined apply wherever the course is undertaken in Zambia.

The Trainers shall work with the Learners to collect evidence of competence, using the benchmarks provided by the unit standards. During the year, the Learners shall be required to undertake a series of practical assessment tasks. It is the sum of all these assessments tasks that deems a Learner to be competent (or not).

This approach to assessment is not a one-off event but one that gives learners many opportunities to demonstrate skill and allow for the capturing and recording of these demonstrations.

For the Learner to be deemed competent, they must demonstrate competency in every aspect of the practical tasks being undertaken. It must however be understood by the Trainer that Competency does not mean expert. It means that the candidate has attained sufficient skill and knowledge to perform the activity or service to a degree and quality that is acceptable to the industry and the customer in a time within which a competent person at the level could reasonably be expected to perform the task.

While this will be undertaken at institutional level, it is therefore envisaged that the Assessment principles of VALIDITY, RELIABILITY, FAIRENESS and FLEXIBILITY shall at all times be adhered to.

Pre-Assessment

Assessment process explained to the Trainee (✓ if Yes).	<input type="checkbox"/>
Any appeal relating to the outcome of the assessment or the way in which the assessment was conducted shall be made through the TEVETA <u><i>fair treatment policy</i></u> as explained to the Trainee (✓ if Yes).	<input type="checkbox"/>

Learner/Trainee Learner/Trainee name: (Print) Learner/Trainee comments:	Assessor/Examiner Assessor/Examiner name: (Print) Assessor/Examiner comments:	
I fully understand the assessment and appeals process.	Theory assessment sighted and checked as satisfactory.	<input type="checkbox"/>
Signature: Date:	Signature: Date:	

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TASK 1: MEASUREMENTS, MARKING OUT AND CUTTING

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety regulations. This should include <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging the tools in order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Carry out measurements using a steel rule and measuring tape. This should include: <ul style="list-style-type: none"> Measuring 20 X 150mm round bar Measuring 50 X 12 X 200mm flat bar Measuring a 30 X 30 X 150mm square bar 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c)	Mark out the work piece shown in the figure below. This should include: <ul style="list-style-type: none"> Applying a layout / Marking out substance Marking out straight lines using a Scriber and steel rule 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d)	Cut the marked out work piece using a hacksaw. This should include; <ul style="list-style-type: none"> Selecting the correct blade Cutting a 100mm X 80mm X 3mm thick piece using a hacksaw. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner's comments:

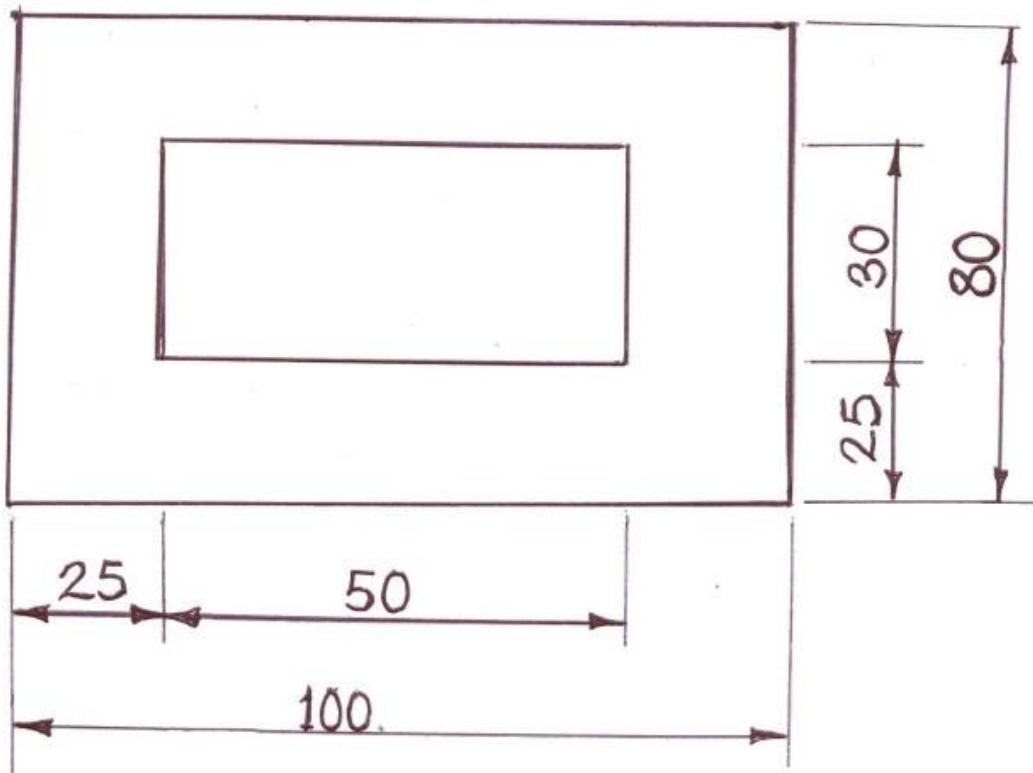
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Examiner Name/Sign:

Learner's Name/sign:

Date:

Date:



TASK 2: TAKING MEASUREMENTS USING A VERNIER CALIPER

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety regulations. This should include: <ul style="list-style-type: none"> • Putting on the correct PPE • Observing good house keeping • Arranging the tools in order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Carry out measurements on a flange coupling using a vernier calipers. These measurements include: <ul style="list-style-type: none"> • Flange Diameter = 70mm • Bore Diameter = 16mm • Hub diameter = 28mm • Hub length = 25mm • Flange thickness = 15mm <p>As shown in the diagram below</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner's comments:

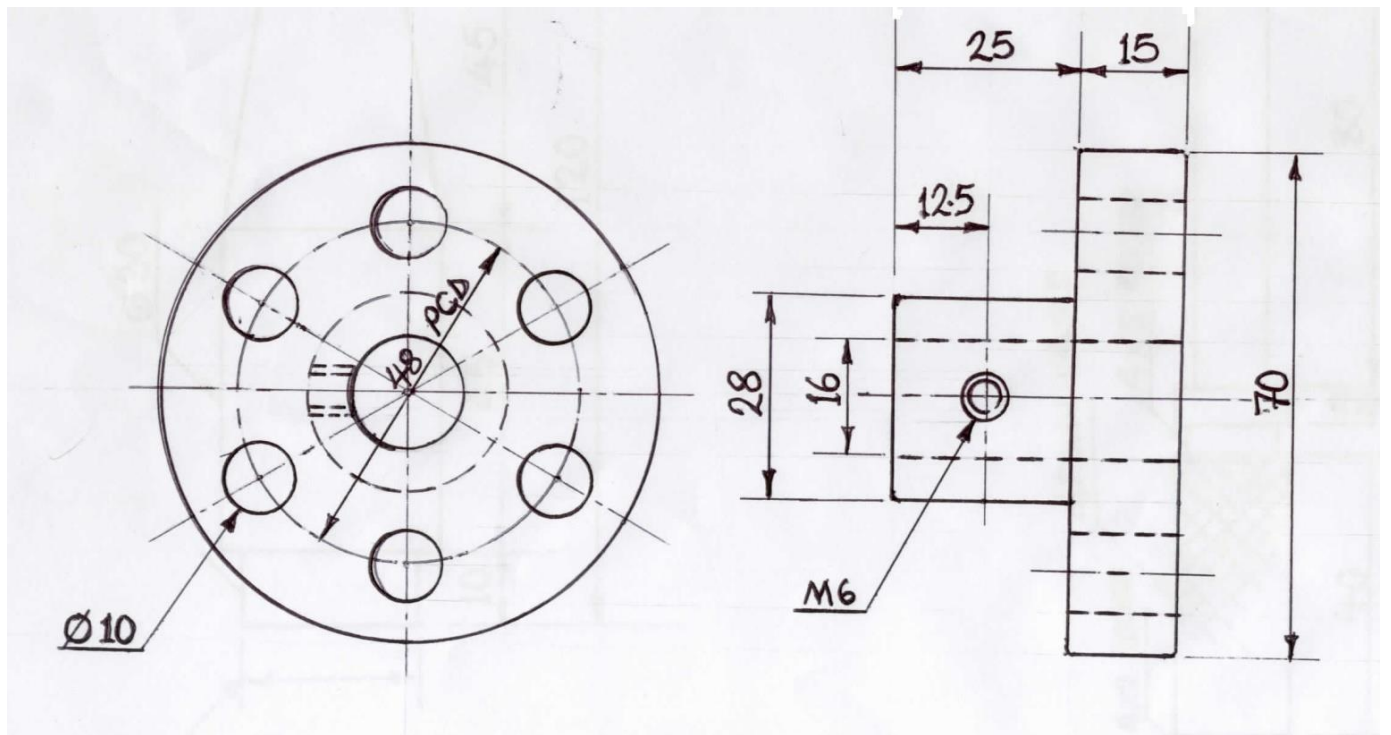
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Examiner Name/Sign:

Learner's Name/sign:

Date:

Date:



TASK 3: TAKING MEASUREMENTS USING A MICROMETER

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety regulations. This should include: <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging the tools in order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Carry out measurements using a micrometer. This should include: <ul style="list-style-type: none"> Zeroing the micrometer Measure bore diameter, outside diameter and width of a 22210 bearing Record the readings 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner's comments:

Signed:

Examiner Name/Sign:

Learner's Name/sign:

Date:

Date:

TASK 4: MARKING OUT USING MARKING OUT EQUIPMENT

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety procedures. This should include: <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging the tools in order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Find the centre of a 50mm diameter round bar. This should include: <ul style="list-style-type: none"> Using of V – blocks to hold the work Marking out lines using a vernier height gauge/surface gauge. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

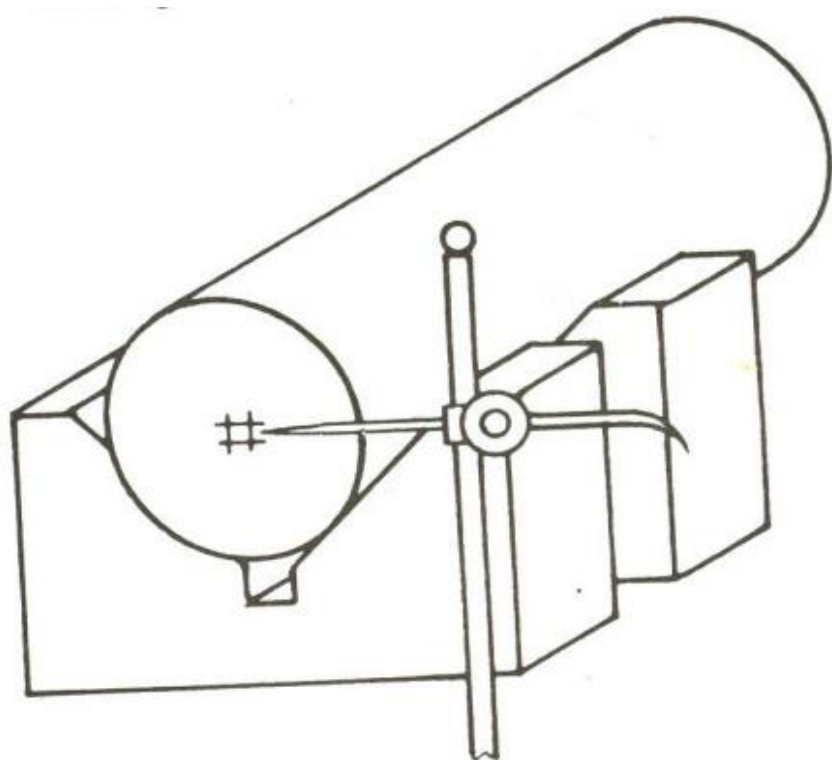
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Learner`s Name/sign:

Date:

Date:



TASK: 5 CUTTING USING POWER SAW

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety procedures. This should include: <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging the tools in good order Ensuring safety guards are in place 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Cut work piece using power hacksaw. This should include <ul style="list-style-type: none"> Selecting the correct blade Cutting a 50 x 150 mm round bar 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner's comments:

Signed:

Examiner Name/Sign:

Learner's Name/sign:

Date:

Date:

TASK: 6 METAL CUTTING USING A CHISEL

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety procedures. This should include: <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging the tools in good order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Cut plain 3mm mild steel plate with a chisel. This should include: <ul style="list-style-type: none"> Marking out the work to be chiselled. Securing work in the vice Chiselling the shaded portion 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

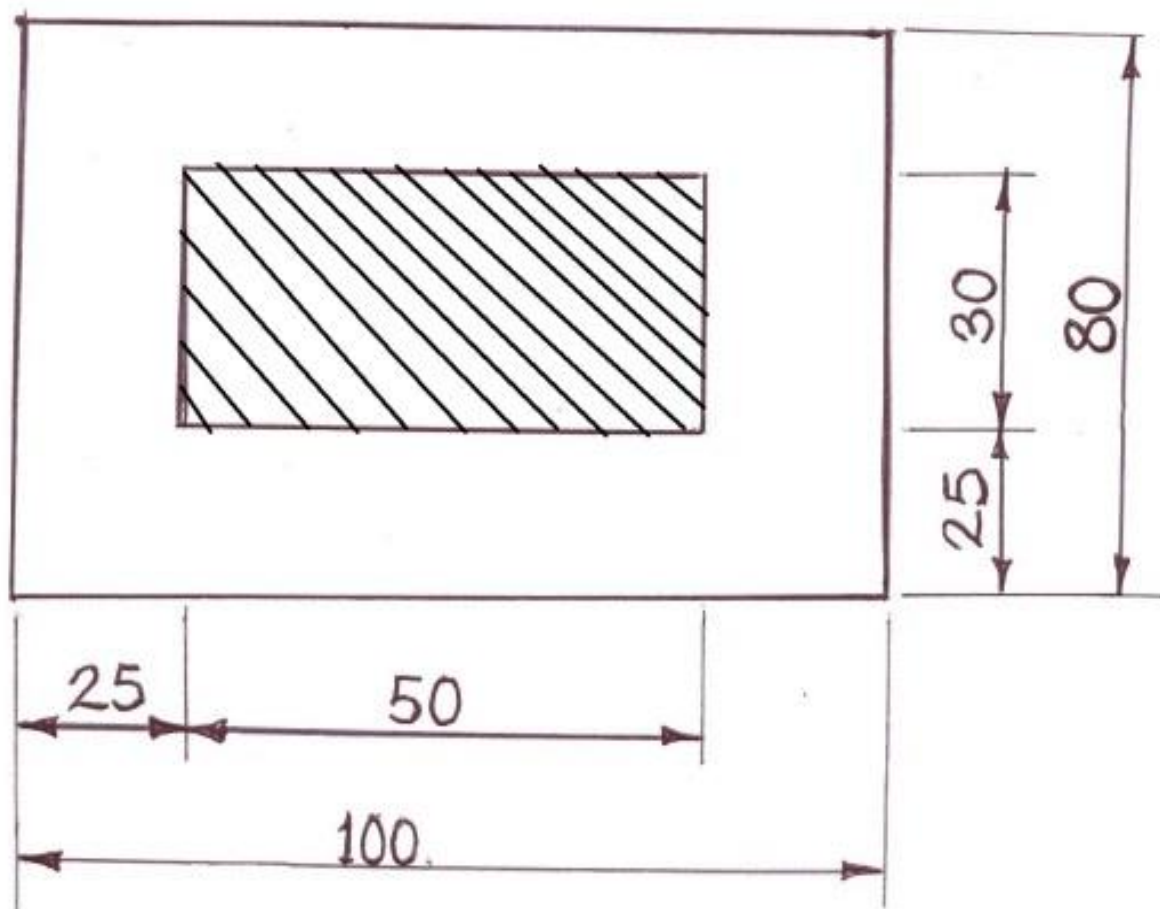
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Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:



TASK: 7 FILING

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety procedures. This should include: <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging tools in good order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Cross file the work. This should include <ul style="list-style-type: none"> Selecting the correct file(Coarse) Using the correct filing techniques, file to the required dimensions 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c)	Draw filing the work. This should include: <ul style="list-style-type: none"> Selecting the correct file (Fine) Using the correct filing techniques 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner's comments:

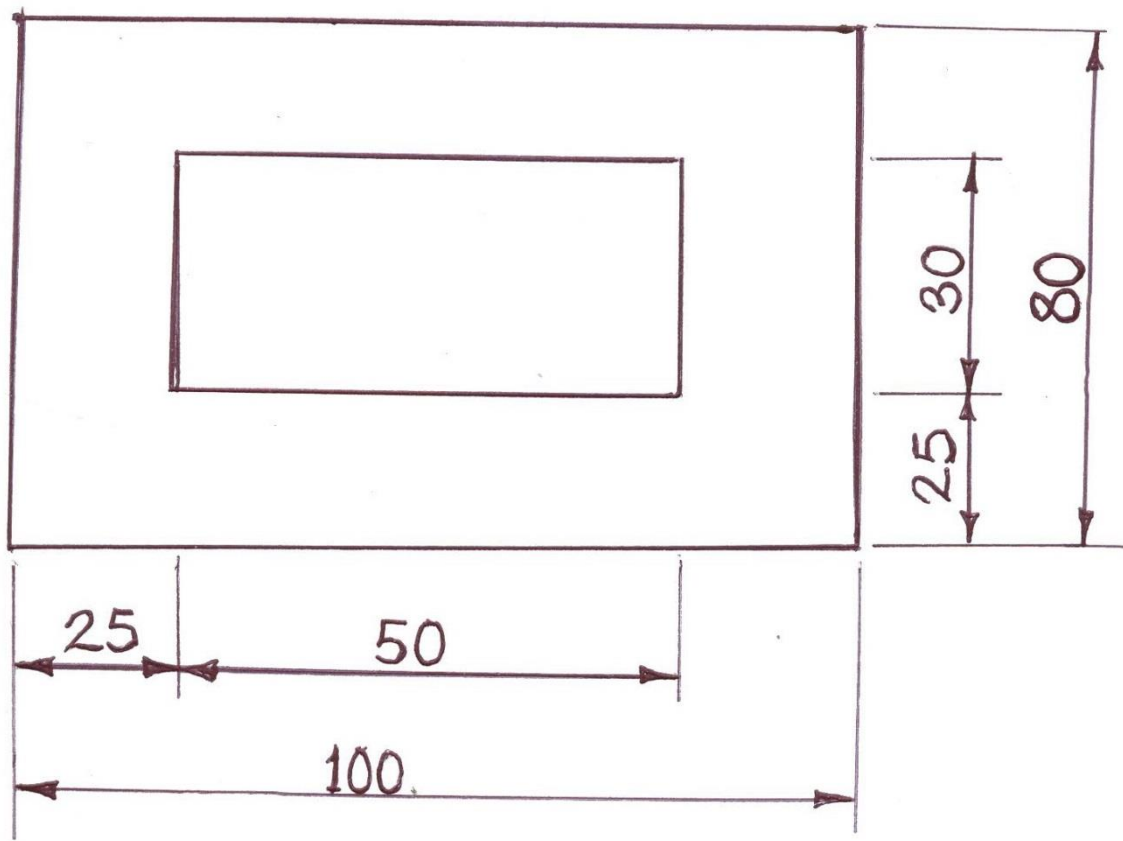
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Examiner Name/Sign:

Learner's Name/sign:

Date:

Date:



TASK 8: DRILLING, COUNTERSINKING AND REAMING

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety regulations. This should include: <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging the Tools in good order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Drill a 16mm diameter through hole in a 20mm mild steel plate. This should include: <ul style="list-style-type: none"> Marking out and centre punching the position to be drilled Pilot drilling the hole to 5mm diameter Drilling the required the hole to 16mm diameter 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c)	Countersink one end of a 10mm diameter through hole in a 20mm mild steel plate. This should include: <ul style="list-style-type: none"> Drill a 10mm hole using a drilling machine Countersinking the hole using a 60° Countersink to a depth of 5mm on a drilling machine 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d)	Ream a hole to 12mm diameter in a 20mm mild steel plate. This should include: <ul style="list-style-type: none"> Drilling a 11.75mm diameter hole using a drilling machine Ream the hole to 12mm using a drilling machine 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 9: COUNTERBORING AND SPOT FACING USING A DRILLING MACHINE

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety regulations. This should include: <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging the Tools in good order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Counter bore one end of a 12mm diameter through hole in a 20mm mild steel plate. This should include: <ul style="list-style-type: none"> Drilling a 12mm hole using a drilling machine Counterboring the hole using a Counterboring tool to a depth of 10.5mm on a drilling machine 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c)	Spot face a 12mm diameter hole with a Counterboring tool. This should include: <ul style="list-style-type: none"> Drilling a 12mm hole using a drilling machine Spot facing the hole using a 21mm Counterboring tool 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiners Comment

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Signed: Examiner's Name/ Sign

Learner's Sign:

Date:

Date:

TASK 10: RIVETING

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety regulations. This should include: <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging the Tools in good order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Making a riveted try square as per drawing below. This should include: <ul style="list-style-type: none"> Making stock from 20 mm flat bar and blade from a 6 mm bar Marking out and drilling 5mm holes Countersinking with 8mm drill bit Assemble the two components together 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner's comments:

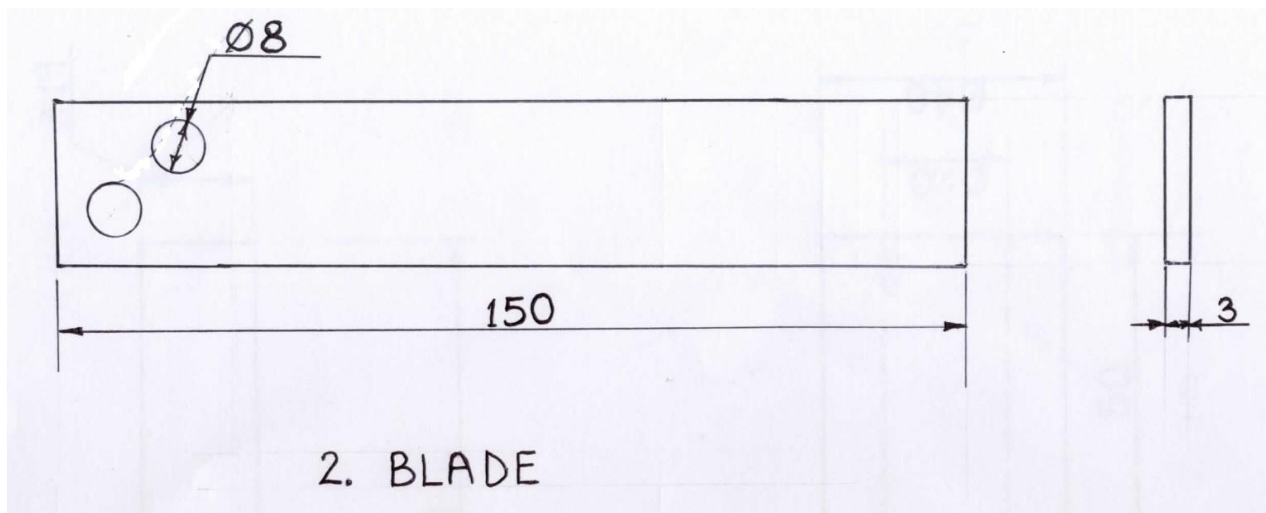
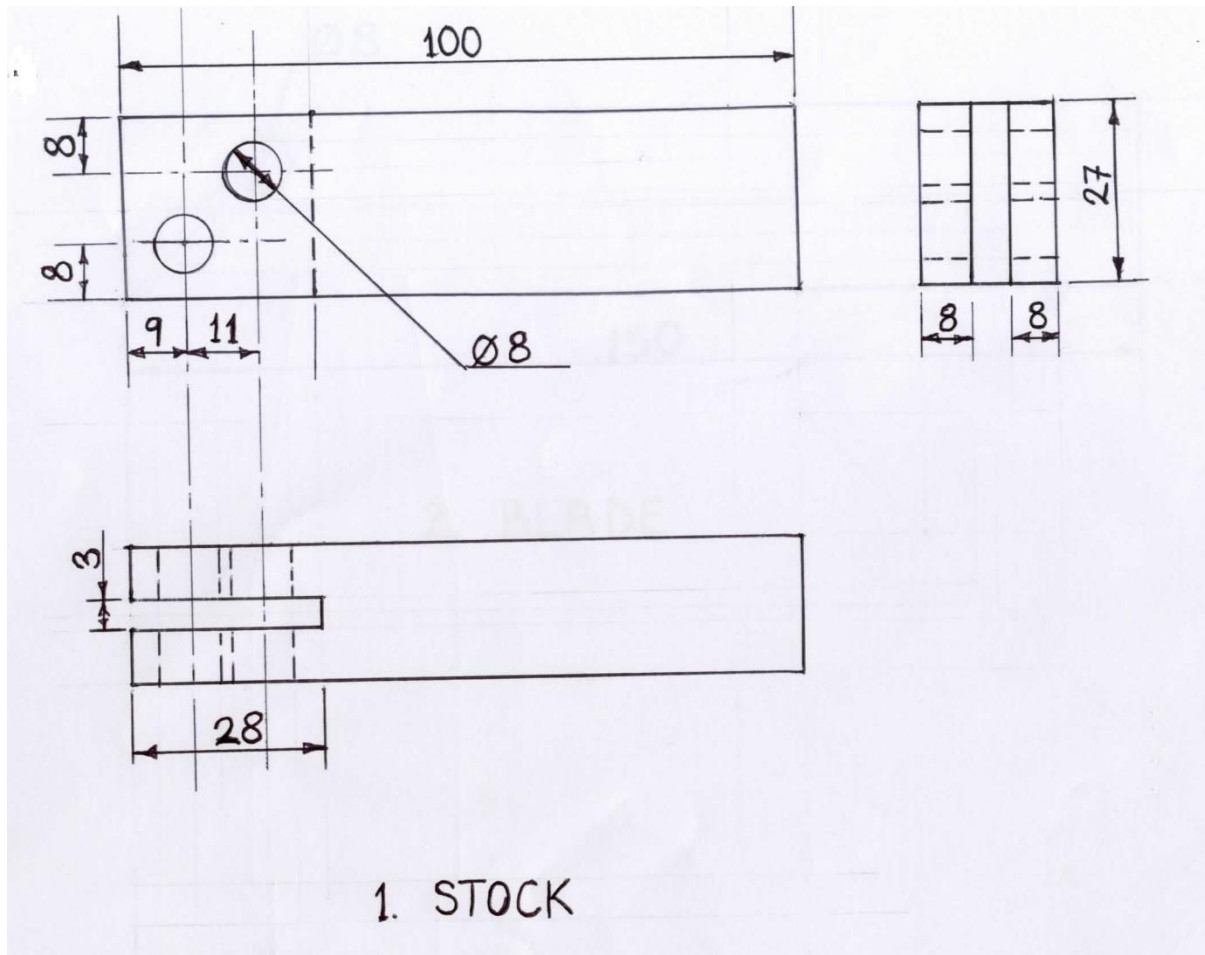
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Examiner Name/Sign:

Learner's Name/sign:

Date:

Date:



TASK 11: PARALLEL TURNING AND FACING USING A LATHE

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety regulations. This should include: <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging Tools in good order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Make the male part of a hinge. This should include: <ul style="list-style-type: none"> Facing to the work piece using a machine Parallel turning to the required diameter using a lathe machine 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

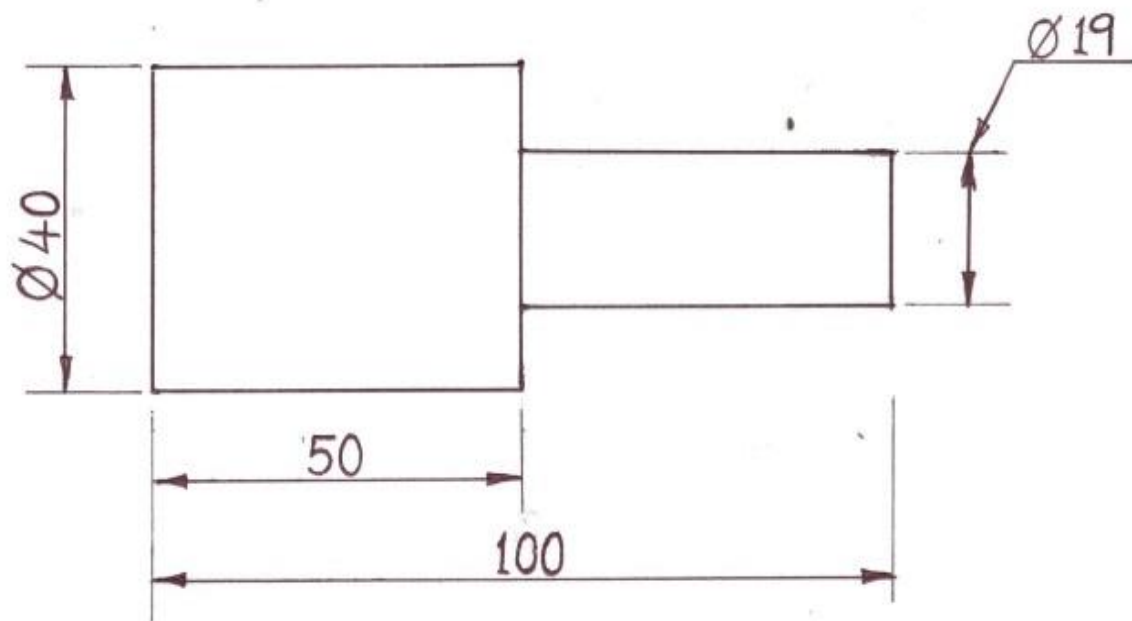
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Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:



TASK 12: DRILLING USING A LATHE

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety regulations. This should include: <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging Tools in good order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Make the female part of a hinge. This should include: <ul style="list-style-type: none"> Facing the material to the length of 50mm using a lathe machine Turning to a diameter of 40mm using a lathe machine Drilling a 20mm diameter hole using a lathe machine 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner's comments:

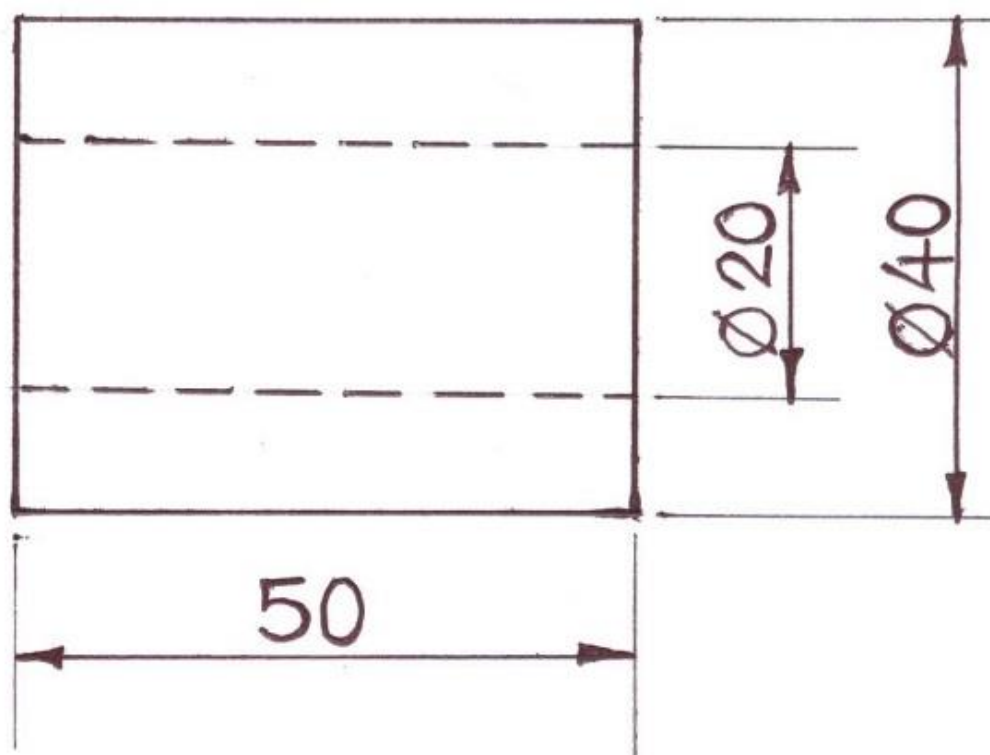
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Examiner Name/Sign:

Learner's Name/sign:

Date:

Date:



TASK 13: PARTING OFF, KNURLING AND RECESSING

Activity/operation		Attempts					
		Satisfactory			Not Satisfactory		
During observation of work activities, the candidate demonstrated that they can:		1	2	3	1	2	3
(a)	Adhere to safety procedures. this could include: <ul style="list-style-type: none"> Putting on the correct PPE Observing good house keeping Arranging tools in good order 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Carry out parting off, knurling and recessing operations in order to make a stub pin punch. This should include: <ul style="list-style-type: none"> Reducing a Ø 20 x 170mm mild steel round bar to the required dimension Knurling Recessing 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner's comments:

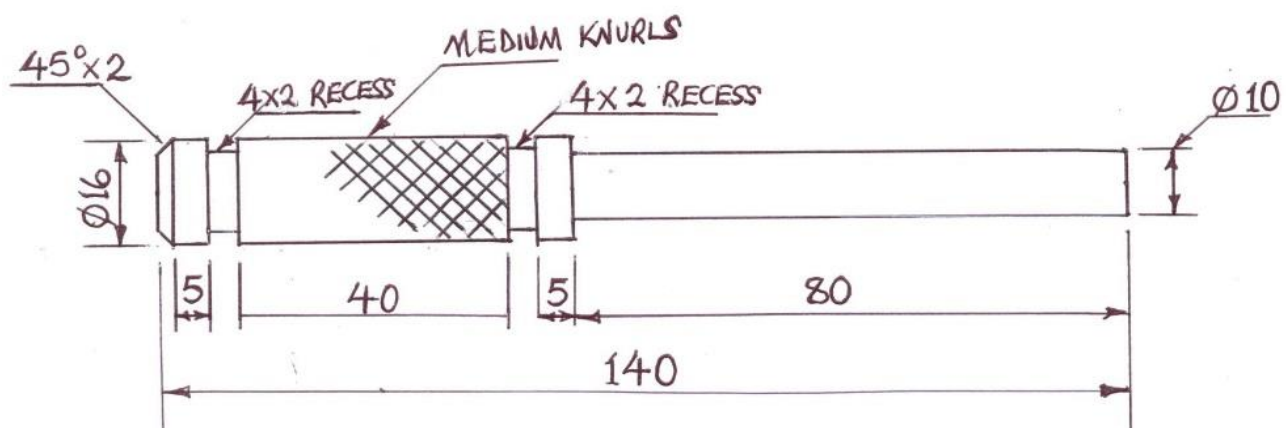
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Examiner Name/Sign:

Learner's Name/sign:

Date:

Date:



FINAL PRACTICAL ASSESSMENT SUMMARY

Practical assessment summary	Satisfactory	Not Satisfactory
TASK 1: Measurement, Marking Out And Cutting	<input type="checkbox"/>	<input type="checkbox"/>
TASK 2: Taking Measurements Using A Vernier Caliper	<input type="checkbox"/>	<input type="checkbox"/>
TASK 3: Taking Measurements Using A Micrometer	<input type="checkbox"/>	<input type="checkbox"/>
TASK 4: Marking Out Using Marking Out Equipment	<input type="checkbox"/>	<input type="checkbox"/>
TASK 5: Metal Cutting Using A Power Saw	<input type="checkbox"/>	<input type="checkbox"/>
TASK 6: Cutting Using A Chisel	<input type="checkbox"/>	<input type="checkbox"/>
TASK 7: Filing	<input type="checkbox"/>	<input type="checkbox"/>
TASK 8: Drilling, Countersinking And Reaming	<input type="checkbox"/>	<input type="checkbox"/>
TASK 9: Counterboring And Spot Facing	<input type="checkbox"/>	<input type="checkbox"/>
Task 10: Riveting	<input type="checkbox"/>	<input type="checkbox"/>
TASK 11: Parallel Turning And Facing Using A Lathe	<input type="checkbox"/>	<input type="checkbox"/>
TASK 12: Drilling Using A Lathe	<input type="checkbox"/>	<input type="checkbox"/>
TASK 13: Parting Off, Knurling And Recessing	<input type="checkbox"/>	<input type="checkbox"/>

Assessor/Examiners comments:

ASSESSMENT OUTCOME

Competent



Not Competent

Learner/Trainee	Assessor/Examiner
Learner/Trainee name: _____ (Print)	Assessor/Examiner name: _____ (Print)
Learner/Trainee comments:	Assessor/Examiner comments:
Signature: _____ Date: _____	Signature: _____ Date: _____

VALIDATION OF THE ASSESSMENT

NAME:..... DATE:.....

POSITION: **PRINCIPAL/HEAD OF INSTITUTION**

SIGNATURE:..... NAME INSTITUTION:.....

STAMP: