

guidelines for instructors

**how to assess
in
practical training**

**metal
trades**

T. T. P. SERIES - 31

Price Rs. 7/-



**DEVELOPMENT CELL
FOR SKILLED LABOUR TRAINING
DIRECTORATE OF MANPOWER & TRAINING
GOVERNMENT OF THE PUNJAB
LAHORE**

When evaluating workpieces from exercises and tests a guideline is needed to ensure that the marking will not depend on the controller's own conception and imagination.

The following "Marking System" and "Procedure for Tests" have therefore been developed to ensure a standardized and fair evaluation of workpieces.

how to assess in practical training

Joachim Hagemann

metal trades

first edition: may 1977

published by:

DEVELOPMENT CELL FOR
SKILLED LABOUR TRAINING
DIRECTORATE OF MANPOWER & TRAINING
PUNJAB. LAHORE

Printed by : Aalameen Publications, Press
22/10, Rattigan Road Hajvery Park Lahore

Price Rs. 7/-

LIST OF CONTENTS

	Page
1. The Rating Criteria	1
1.1 The Quality of the Workpiece	1
1.2 The Method of Work (for tests only)	1
1.3 Time needed for Producing the Workpiece	1
2. Marking System	1
2.1 The 100 Marks' Scale	2
2.2 The 10 Marks' Scale	2
2.2.1 The Quality of the Workpiece	2
2.2.2 The Method of Work (for tests only)	4
3. Time Control	5
3.1 Prorated Time	5
3.2 Time Control for Tests	5
3.3 Time Control for Basic Training	5
3.4 Time Control for ATC Programme	6
3.5 Time Control for TTC Programme	6
4. Marking Factor	8
5. Marking Sheet	8
5.1 Marking Sheet for Tests	8
5.2 Marking Sheet for Exercises	10
6. Assessment Card for Apprentices and Trainees	11
7. Progress Report for Apprentices	11
8. Progress Report for Trainees	12
9. Procedure for Practical Tests	13
Appendix	

1. THE RATING CRITERIA

In the assessment of workpieces three different rating criteria have to be considered.

- 1.1 The quality of the workpiece
- 1.2 The method of work (for tests only)
- 1.3 Time needed for producing the workpiece

1.1 The Quality of the Workpiece

The rating in this respect covers the evaluation of measurements, fits, evenness of surfaces, correctness of angles, functioning and so on.

1.2 The Method of Work (for tests only)

This includes handling of tools, instruments and machines, the correctness in the sequence of operations, observation of safety rules and tidiness at the individual workplace.

1.3 Time needed for Producing the Workpiece

The time needed to finish a job will be evaluated for exercises and for tests. The rating will be in respect of the time allowed and completion time as per attached time value table or time control card for exercises.

2. MARKING SYSTEM

Marking will be in 2 steps using 10 and 100 full marks' scale as follows:

The 100 marks' scale will be used for the Final Results and the 10 marks' scale will be used in the individual marking columns on the marking sheet.

2.1 The 100 Marks' Scale

Very Good: more than 92 up to 100 marks - Grade 1.

The grade "very good" should be awarded for an outstanding performance only. The performance shown must be much better than that for "good" in its precision, finish, technique, independence and efficiency of the student.

Good: more than 78 up to 92 marks - Grade 2.

The achievement here must show the capability of independent thinking by the student. In respect of completion of work and final form, much better than average. This grade requires high proficiency and knowledge.

Average: from 60 up to 78 marks - Grade 3.

Normal performance, the work shows no major faults. The note expresses satisfaction.

Poor: from 0 up to 59 marks

(Failed)

The performance is below average and the student will be considered failed.

2.2 The 10 Marks' Scale

The general use of this rating scale is as mentioned below:

- a) 10 - 6 - 0 for subjective evaluation.
- b) 10 - 7 - 3 for objective evaluation.

.2.1 The Quality of the Workpiece

a. Functioning

- 10 points = functioning according to drawing
- 6 points = partly functioning
- 0 points = not functioning

b. Fitting

- 10 points = fitting according to drawing
- 6 points = still acceptable
- 0 points = not acceptable

c. Flatness and angles

- 10 points = perfect angles and flatness,
no light gap
- 6 points = acceptable, correction possible with-
out changing the measurement(s)
- 0 points = unacceptable, correction not possible
without changing the measurement(s)

d. Testing with snap and plug gauge

- 10 points = "Go-end" of the gauge must fit in
smoothly, "Not-go-end" must not enter
- 6 points = "Go-end" or "Not-go-end" can be forced
in
- 0 points = "Not-go-end" enters with clearance or
"Go-end" cannot be fitted in

e. Deviation of measurements

- 10 points = actual size is within the given toler-
ance

Tolerance zone 0.1 mm or more

- 7 points = the actual size deviates from tolerance
zone by not more than 0.1 mm
- 3 points = the actual size deviates from tolerance
zone by not more than 0.2 mm
- 0 points = the actual size deviates from tolerance
zone by more than 0.2 mm

Tolerance zone less than 0.1 mm

- 7 points = the actual size deviates from tolerance
zone by not more than 0.01 mm
- 3 points = the actual size deviates from tolerance
zone by not more than 0.02 mm
- 0 points = the actual size deviates from tolerance
zone by more than 0.02 mm

f. Evaluation of welded parts

(although this is a subjective type of evaluation the rating 10 - 7 - 3 - 0 will be used)

- 10 points = welded joints properly melted and connected, no slag inclusions, proper root bead, clean and even beads
- 7 points = welded joints with slight undercut, no slag inclusions, proper root
- 3 points = welded joints overheated, or cold joints, some slag inclusions
- 0 points = not acceptable

2.2.2 The Method of Work (for tests only)

The method of work must be observed during the test by two examiners independently and the marks should be recorded immediately.

The observation should cover the following:

a. Handling of tools, measuring instruments and machines

- 10 points = skilful and correct application of the equipment
- 6 points = improper application of the equipment (e.g. wrong cutting speed, no coolant, improper clamping etc.)
- 0 points = misusing (mishandling) of tools (e.g. breakage and damage of tools and instruments etc.)

b. Sequence of operations

- 10 points = correct sequence
- 6 points = no major deviations
- 0 points = incorrect sequence

c. Observation of safety rules

- 10 points = safety precautions observed
- 6 points = no observation of safety rules (no accident)
- 0 points = careless work in respect of safety (accident)

d. Tidiness at workplace

10 points = tidy workplace

6 points = partly untidy

0 points = very untidy (measuring instruments and tools mixed up)

3. TIME CONTROL

3.1 Prorated Time

The time allowed for producing the piece is determined according to the scope of work and quality required. It is calculated in such a way, that even a slow but correctly working student will be able to achieve satisfactory results.

3.2 Time Control for Tests

A student should not think that he is going to fail in the test when he observes that he cannot complete the work in time. The quality of work is important. The participants should be informed about this regulation before the test starts, but to ensure that this will not slow down the speed of working, they also should be informed about the additional points gained for completing the testpiece in "under-time".

The prorated time can be extended to a maximum of 10 %. After this extension, however, the testpiece has to be handed over to the examiners.

If the completion time is above or below the prorated time, this will result in minus or plus points respectively. Every 2 % "over"- or "under-time" will result in one minus or one plus point respectively.

Additional points for "under-time", however, will be given only, if the marks for quality and method of work exceed 78 points.

For calculating the time marks, the attached "Time value table" should be used. A time record as per Marking Sheet has to be kept during the test in order to calculate the actual working time.

3.3 Time Control for Basic Training

During Basic Training a fixed number of exercises is to be completed in a certain period. Fitters and Tool & Diemakers for example have to produce 27 exercises within 22 weeks. If a student completes less exercises, his average marks

will still be calculated on the basis of 27 workpieces, and his overall "Basic Training average" will be lower. The time used for each workpiece is not to be considered. Rather, emphasis is laid on the student acquiring more practice while performing the work carefully and patiently.

3.4 Time Control for ATC Programme

In Trade Training I (Advanced Training) and Trade Training II (Final Training) the completion time for each exercise will be considered for marking, the time tolerance being fixed at + 30 % of the prorated time. After the expiry of the maximum time, however, the workpiece has to be handed over to the instructor. For every 10 % over- or under-time, 3 marks will be added or deducted irrespective of the marks secured.

3.5 Time Control for TTC Programme

Due to the large number of exercises in the TTC Programme the time control procedure for Trade Training I is the same as during Basic Training, i.e. a fixed number of exercises have to be completed during this training period.

During Trade Training II and III the time control will be similar to that of the ATC Programme, i.e. the completion time of each exercise will be considered for marking and the time tolerance is fixed at + 30 % of the prorated time. However, some selected exercises have to be completed under test conditions, i.e. the trainee has to hand over the exercise after the expiry of maximum 10 % above the prorated time in any case.

To reduce the paper work of the instructors and simultaneously ensure proper time control the student himself has to keep the time record.

Therefore, together with the drawing and the material a "Time Control Card" (sample attached) will be given to the student. In this card the instructor has to fill in the name of the student, no. or name of the exercise, the time allowed and the date and time of starting the work.

Any "off time" of more than 30 min., e.g. machine break down, sick leave or working on other than the specific exercise, must be entered in the "Time Control Card" by the student and signed by the instructor in charge. After completion of the exercise the date and time of finishing will be entered and the "gross working time" calculated. The "off time" will be totalled and deducted from the gross working time to obtain the completion time.

When comparing the "time allowed" with the "completion time" the difference, if any, will result in plus or minus marks.

Example 1: - "over-time"

time allowed 18 h

completion time 20 h

deviation:

18 h + 10 % = 19.8 h - 3 marks

18 h + 20 % = 21.6 h - 6 marks

18 h + 30 % = 23.4 h - 9 marks

Time tolerance	Time marks
± 10%	3
± 20%	6
± 30%	9

In this case 6 marks have to be deducted when calculating the final marks.

a.	Sum: Functioning & Finishing	
b.	Sum: Accuracy of work	
		$\frac{\text{Marks obtained}}{\text{Reduction factor}} \div \text{---} = \text{---}$
		Time marks ± - 6
		Final marks =

Example 2: - "under-time"

time allowed 30 h

completion time 25 h

deviation:

30 h - 10 % = 27 h + 3 marks

30 h - 20 % = 24 h + 6 marks

30 h - 30 % = 21 h + 9 marks

In this case 3 marks have to be added when calculating the final marks.

a.	Sum: Functioning & Finishing	
b.	Sum: Accuracy of work	
		$\frac{\text{Marks obtained}}{\text{Reduction factor}} \div \text{---} = \text{---}$
		Time marks ± + 3
		Final marks =

If the completion time is above or below the time allowed, the next higher time limit will be considered for calculating the time marks.

4. MARKING FACTOR

Every workpiece has a different degree of difficulty in its processing. In order to give every workpiece a fair evaluation, a marking factor will be used to multiply the initial marks. The degree of difficulty varies from dimension to dimension so that the factor will be set anew every time.

Guide for Determination of Marking Factor

a. Complex functioning	Factor 5
b. Simple functioning	Factor 4
c. Finishing deburring, surface finishing, chamfering, right angles	Factor 2
d. Fine tolerances up to ± 0.05 mm Fits H ₇ Angles measured with gauges	Factor 3
e. Tolerances from ± 0.06 to 0.2 mm Angles $\pm 30'$	Factor 2
f. Rough tolerances from ± 0.2 mm and more	Factor 1
g. Handling of tools, measuring instruments and machines Sequence of operations Observation of safety rules Tidiness at workplace	Factor 2

5. MARKING SHEET

5.1 Marking Sheet for Tests

This marking sheet contains three rating criteria.

a. Functioning and finishing

Because these are subjective criteria, the rating is 10 - 6 - 0 in order to help the controller to make 'clear-cut' decisions. This rating should cover the general impression, assembly, deburring, surface finishing and so on.

Checked by : _____ 1st control

NAME :

Trade :

Checked by : _____ 2nd control

Roll No.:

S.No.	P.No.	FUNCTIONING & FINISHING (Rating . 10 - 6 - 0)	INITIAL MARKS	FACTOR	MARKS
1					
2					
3					
4					
5					
6					
TOTAL					

S.No. = Serial Number

P.No. = Parts to be checked

Initial marks given by the controller

Factor = Marking factor for degree of difficulty

Marks = initial marks multiplied with factor

b. Accuracy of work

For the accuracy of work two different rating scales have to be applied:

- for dimensions which are checked with gauges 10 - 6 - 0
- for other dimensions 10 - 7 - 3 - 0

The reason for this difference is that checking with gauges sometimes is not completely objective.

Rating 10-6-0 for checking with gauges.

Rating 10-7-3-0 for other dimensions.

S.No.	P.No.	Accuracy of work	TOLERANCE	ACTUAL SIZE	INITIAL MARKS	FACTOR	MARKS
7							
8							
9							
10							

c. Method of work

S. No.	P. No.	METHOD OF WORK (Rating 10-6-0)	INITIAL MARKS	FACTOR	MARKS
36	X	Handling of Tools, Machines, Instruments etc			
37	X	Sequence of Operation			
38	X	Observation of safety rules			
39	X	Tidiness at workplace			
Total					

Here again is a subjective evaluation and the rating is 10 - 6 - 0.

To determine the completion time, a time record has to be kept, as shown below.

Firstly, date and time of the beginning of work have to be entered. Secondly, the usual breaks have to be recorded, and in addition any interruption of work of more than 15 minutes must be recorded by the controllers.

TIME RECORD

date	start at	tea break		lunch break		break down of machine, electricity, etc.		stop at	actual working time h
		from	to	from	to	from	to		
Completion Time									

Calculation of the Final Result

The testpieces should be evaluated by two controllers independently.

For this purpose two marking sheets for each testpiece are required.

Each controller must check the testpiece and calculate the 'Total Marks' individually, on his own marking sheet, for:

1. Functioning and finishing
2. Accuracy of work
3. Method of work

Thereafter the results will be added up in the marking sheet of the first controller and the average marks will be calculated and then divided by the reduction factor (add up all marking factors, and divide by 10), which will give the total marks of the whole testpiece.

Now the time marks will be calculated according to the attached 'Time Value Table' and added or deducted, respectively to the total marks, thus the final result is calculated.

5.2 Marking Sheet for Exercises

The marking sheet for exercises is similar to that for tests. Except:

- only one evaluation is necessary
- the method of work will not be considered
- the time is to be calculated according to the procedure already mentioned.

6. ASSESSMENT CARD FOR APPRENTICES AND TRAINEES

The assessment card is a list of all exercises which are to be completed within one training period, e.g. Basic Training, Trade Training I, II and III.

After evaluating the workpiece the results will be transferred from the marking sheets to the assessment card of the respective apprentice or trainee and at the end of the training period each apprentice's/trainee's average is to be calculated.

In Basic Training the average will be calculated by dividing the sum of all final marks by the fixed number of given exercises. In Trade Training I, II and III the sum will be divided by the number of actually completed and checked exercises.

The results as calculated in the Assessment Card will be recorded in the Progress Report.

7. PROGRESS REPORT FOR APPRENTICES

The progress report card consists of two main parts:

- a. Progress report on inplant training
 - b. Progress report on institutional training
- a. During inplant training the evaluation of practical work will mainly be subjective and should be done twice a month according to the criteria mentioned in the card.

The monthly attendance record has to be maintained by entering no. of working days and no. of days absent in respective columns.

- b. The institutional training is divided into three periods:
 - Basic Training
 - Trade Training I
 - Trade Training II

Here the results, as calculated in the assessment card for apprentices have to be entered. In order to give some information about the work in respect of time, the average time marks will also have to be entered.

The overall conduct for each training period in practical as well as in theoretical training and the days absent should be recorded.

The periodical results evaluated for the session and the test of the subjects Trade Theory, Technical Mathematics and Technical Drawing and the average will be noted in the card.

8. PROGRESS REPORT FOR TRAINEES

All particulars of the trainee have to be filled in by the Training Clerk from the application form of the trainee and counterchecked by the Head Clerk or Office Superintendent.

The training record will be maintained periodwise - Basic Training, Trade Training I, II and III by the concerned Senior Instructor / Chief Instructor.

1. Attendance: By comparing the no. of working days of the institution with the no. of working days of the trainee.
(in %)
2. Sessional:
 - a) Theory - home assignment, periodical test etc.
 - b) Workshop proficiency - evaluation of practical workpieces as calculated in the assessment card (example attached)
3. Test: Result of promotion test
4. Conduct: Judgement of the behaviour of the trainee in the centre extended towards instructors and colleagues, co-operation and willingness to learn.

If a trainee is allowed to appear in a supplementary test or to repeat a training period (semester) the new marks thus achieved should be filled in with red ink directly under the entries already made. The average shall then be calculated from the new marks accordingly.

The average of the achievements during 24 months' training in theoretical knowledge as well as in practical proficiency shall be calculated from the averages of the preceding three periods by adding them up and then dividing the sum by three.

In case of 18 months' training the average is to be calculated from the averages of the preceding two periods by adding them up and then dividing the sum by two.

Space is provided for "Remarks" for making entries about any disciplinary action taken against a trainee, repetition of a training period/semester or placed in compartment etc.

9. PROCEDURE FOR PRACTICAL TESTS

The participants have to be informed about the following points before starting the test:

1. Before starting the actual work the participants have to check the raw materials in respect of dimensions and number of pieces. All pieces must be marked with a special punch. This mark should remain on the workpiece throughout the test. If the surface, bearing the punch mark, has to be machined or filed, the participant first has to report to the instructor in charge in order to get a new punch mark on another surface.
2. For producing the testpiece only these specially punched materials are to be used, other pieces will not be accepted by the controllers.
3. Before starting, the test participants should read the drawing carefully and determine the sequence of operations, which tools and machines are to be used etc. For this preparation the participants will be given 30 minutes "preparation time". This time will not be added to the test time.
Any doubts in understanding the drawing must be clarified within this period.
4. In case of disturbance, machine breakdown, waiting time etc. the instructor (examiner) has to be informed in order to note down the "time lost". During intervals (tea and lunch break) no work will be allowed.
5. The testpiece has to be produced solely by the test participants. Any consultation between the participants and help from instructors or from outside is not allowed.
6. During the test the examiners will keep a record of each participant which contains the following points:
 - a. Observation of safety rules during work
 - b. Tidiness at workplace
 - c. Proper sequence of operations
 - d. Correct use of tools and machines
7. After finishing the testpiece the participant has to punch every workpiece with his Roll No. and hand it over to the examiners together with the drawing. The time of handing over will be recorded as "finishing time". The total "completion time" will be calculated and entered into the marking sheet.

Checked by : _____ Ist control

NAME :

Checked by : _____ 2nd control

Trade :

Roll No. :

S.No.	P.No.	FUNCTIONING & FINISHING (Rating 10-6-0)	INITIAL MARKS	FACTOR	MARKS
1					
2					
3					
4					
5					
6					

Rating 10-6-0 for checking with gauges.

Rating 10-7-3-0 for other dimensions.

TOTAL

S.No.	P.No.	Accuracy of work	TOLERANCE	ACTUAL SIZE	INITIAL MARKS	FACTOR	MARKS
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							

TOTAL

MARKING SHEET

TEST



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING PROGRAMME

S. No.	P. No.	METHOD OF WORK (Rating 10-6-0)	INITIAL MARKS	FACTOR	MARKS
36	<input checked="" type="checkbox"/>	Handling of Tools, Machines, Instruments etc			
37	<input checked="" type="checkbox"/>	Sequence of Operation			
38	<input checked="" type="checkbox"/>	Observation of safety rules			
39	<input checked="" type="checkbox"/>	Tidiness at workplace			
Total					

TIME RECORD

date:	start at:	tea break		lunch break		break down of machine, electricity etc		stop at:	actual working time h
		from	to	from	to	from	to		
Completion Time									

		1st check	2nd check	average
1	Marks : Functioning and finishing			
2	Marks : Accuracy of work			
3	Marks : Method of work			

$\frac{\text{Marks obtained}}{\text{Reduction factor}} = \frac{\quad}{\quad}$
Total Marks

Time allowed : _____ h
 Completion Time : _____ h
 Difference : \pm _____ h
 Time Marks : \pm _____

Total Marks : _____
 Time Marks : \pm _____
 Final Marks : _____

MARKING SHEET

TEST



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING PROGRAMME

TIME CONTROL CARD

Name: _____ Roll No: _____
 Trade: _____ Exercise: _____
 Time allowed _____ h

started: _____ date _____ time _____
 finished: _____
 gross working time _____ h
 total off time _____ h
 completion time _____ h

* off time _____ h Reason _____ Signature of _____
 date _____ h instr. in charge _____

_____ h total off time

Signature of instr. in charge _____

Time tolerance	Time marks
± 10%	± 3
± 20%	± 6
± 30%	± 9

* only if more than 30 min.

Marking Sheet

Name: _____ Roll No. _____
 Trade: _____ Exercise: _____
 Checked by: _____ Time allowed: _____ h

Rating 10-6-0

S.No.	P.No.	a. Functioning & Finishing	Initial Marks	Factor	Marks
1					
2					
3					
4					
5					
Sum					

Rating 10-6-0 for checking with gauges
 Rating 10-7-3-0 for other dimensions

S.No.	P.No.	b. Accuracy of work	Tolerance	Actual Size	Initial Marks	Factor	Marks
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
Sum							

a. Sum: Functioning & Finishing _____
 b. Sum: Accuracy of work _____

Marks obtained _____ =
 Reduction factor _____
 Time marks: _____

Final marks _____

TIME ALLOWED IN HOURS	OVER OR UNDER TIME									
	Between (less than 15 min. no marks awarded or deducted)									
	15 min 29 min	30 min 44 min	45 min 59 min	1h 1h14min	1h15 min 1h29min	1h30 min 1h44min	1h45 min 1h59 min	2h 2h14min	2h15 min 2h29 min	2h30 min 2h44min
8	1,5	3	4,5	5						
9	1	2,5	4	5						
10	1	2	3,5	5						
11	1	2	3	4,5	5			POINTS		
12	1	2	3	4	5					
13 - 14	1	1,5	2,5	3,5	4,5	5				
15 - 16	0,5	1,5	2,5	3	4	4,5	5			
17 - 18	0,5	1	2	2,5	3,5	4	4,5	5		
19 - 20	0,5	1	1,5	2,5	3	3,5	4,5	5		
21 - 22	0,5	1	1,5	2	2,5	3,5	4	4,5	5	
23 - 24	0,5	1	1,5	2	2,5	3	3,5	4	4,5	5

EXAMPLES:

Time allowed. 16h
 Completion time. 16h 40min
 Time marks. = - 1,5

Time allowed. 15h
 Completion time. 14h 25min
 Time marks = +1,5 but only
 if the total result is over 78 marks

TIME VALUE TABLE

for Test only

DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING PROGRAMME



"OVER - OR UNDER - TIME"

Time allowed in hrs.	-10% +10%		-20% +20%		-30% +30%		Time allowed in hrs.	-10% +10%		-20% +20%		-30% +30%	
	Marks +3 -3		Marks +6 -6		Marks +9 -9			Marks +3 -3		Marks +6 -6		Marks +9 -9	
1	0 ⁵⁴	1 ⁰⁶	0 ⁴⁸	1 ¹²	0 ⁴²	1 ¹⁸	16	14 ²⁴	17 ³⁶	12 ⁴⁸	19 ¹²	11 ¹²	20 ⁴⁸
2	1 ⁴⁸	2 ¹²	1 ³⁶	2 ²⁴	1 ²⁴	2 ³⁶	17	15 ¹⁸	18 ⁴²	13 ³⁶	20 ²⁴	11 ⁵⁴	22 ⁰⁶
3	2 ⁴²	3 ¹⁸	2 ²⁴	3 ³⁶	2 ⁰⁶	3 ⁵⁴	18	16 ¹²	19 ⁴⁸	14 ²⁴	21 ³⁶	12 ³⁶	23 ²⁴
4	3 ³⁶	4 ²⁴	3 ¹²	4 ⁴⁸	2 ⁴⁸	5 ¹²	19	17 ⁰⁶	20 ⁵⁴	15 ¹²	22 ⁴⁸	13 ¹⁸	24 ⁴²
5	4 ³⁰	5 ³⁰	4 ⁰⁰	6 ⁰⁰	3 ³⁰	6 ³⁰	20	18 ⁰⁰	22 ⁰⁰	16 ⁰⁰	24 ⁰⁰	14 ⁰⁰	26 ⁰⁰
6	5 ²⁴	6 ³⁶	4 ⁴⁸	7 ¹²	4 ¹²	7 ⁴⁸	21	18 ⁵⁴	23 ⁰⁶	16 ⁴⁸	25 ¹²	14 ⁴²	27 ¹⁸
7	6 ¹⁸	7 ⁴²	5 ³⁶	8 ²⁴	4 ⁵⁴	9 ⁰⁶	22	19 ⁴⁸	24 ¹²	17 ³⁶	26 ²⁴	15 ²⁴	28 ³⁶
8	7 ¹²	8 ⁴⁸	6 ²⁴	9 ³⁶	5 ³⁶	10 ²⁴	23	20 ⁴²	25 ¹⁸	18 ²⁴	27 ³⁶	16 ⁰⁶	29 ⁵⁴
9	8 ⁰⁶	9 ⁵⁴	7 ¹²	10 ⁴⁸	6 ¹⁸	11 ⁴²	24	21 ³⁶	26 ²⁴	19 ¹²	28 ⁴⁸	16 ⁴⁸	31 ¹²
10	9 ⁰⁰	11 ⁰⁰	8 ⁰⁰	12 ⁰⁰	7 ⁰⁰	13 ⁰⁰	25	22 ³⁰	27 ³⁰	20 ⁰⁰	30 ⁰⁰	17 ³⁰	32 ³⁰
11	9 ⁵⁴	12 ⁰⁶	8 ⁴⁸	13 ¹²	7 ⁴²	14 ¹⁸	26	23 ²⁴	28 ³⁶	20 ⁴⁸	31 ¹²	18 ¹²	33 ⁴⁸
12	10 ⁴⁸	13 ¹²	9 ³⁶	14 ²⁴	8 ²⁴	15 ³⁶	27	24 ¹⁸	29 ⁴²	21 ³⁶	32 ²⁴	18 ⁵⁴	35 ⁰⁶
13	11 ⁴²	14 ¹⁸	10 ²⁴	15 ³⁶	9 ⁰⁶	16 ⁵⁴	28	25 ¹²	30 ⁴⁸	22 ²⁴	33 ³⁶	19 ³⁶	36 ²⁴
14	12 ³⁶	15 ²⁴	11 ¹²	16 ⁴⁸	9 ⁴⁸	18 ¹²	29	26 ⁰⁶	31 ⁵⁴	23 ¹²	34 ⁴⁸	20 ¹⁸	37 ⁴²
15	13 ³⁰	16 ³⁰	12 ⁰⁰	18 ⁰⁰	10 ³⁰	19 ³⁰	30	27 ⁰⁰	33 ⁰⁰	24 ⁰⁰	36 ⁰⁰	21 ⁰⁰	39 ⁰⁰

Example: "Under-Time"

Time allowed 14 h

Completion time 12³⁰ h

- 10 % → +3 Marks

Example: "Over-Time"

Time allowed 26 h

Completion time 30⁴⁵ h

+ 20 % → -6 Marks

TIME VALUE TABLE

for exercises



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING PROGRAMME

ASSESSMENT CARD

Basic Training

Name: _____

Checked by: _____

Trade: _____

Roll No.: _____

No.	Exercise (Basic Fitting)	Marks	No.	Exercise (Meas. Course I)	Marks
1	Filing Ex. I		9	Reading Ex. Steellrule	
2	Marking Ex.		14	Questions on Caliper	
3	Stretching Ex.		25	Reading Ex. Vernier Calip.	
4	Filing Ex. II		26		
5	Sawing Ex.		27	Boring Plate (Meas. Ex.)	
6	For Inside Caliper		30	Questions on Gauges	
7	For Sheet Metal Box		31	Spindle with Taper (Meas.)	
8	For Drilling Ex.		32	Disk Cam (Meas. Ex.)	
9	For Riveting Ex.		36	Questions on Angle Meas.	
10	Chipping Ex.		37	Vee-Block (Meas. Ex.)	
11	Fixed Jaw		41	Questions on Water Level	
12	Chipping Ex.				
13	Drilling Ex.				
14	Riveting Ex.				
15	Inside Caliper				
16	Sheet Metal Box				
17	Moveable Jaw				
18	Drilling Ex.				
19	Spindle				
20	Sliding Box				
21	Fixed Jaw				
22	Moveable Jaw				
23	Screw Clamp				
24	Scraping Ex.				
25	Marking Gauge				
26	Fitting				
27	Sliding Bolt				
	Sum				

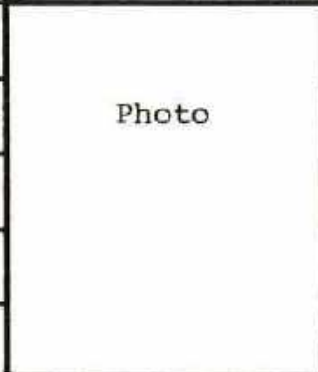
	Sum Exercises 1-27	_____
	Sum Measuring I	+ _____
		÷ _____
	No. of Exercises	37
	Basic Training	} _____
	Sessional	

PROGRESS REPORT FOR TRAINEES

TECHNICAL TRAINING CENTRE



Name:		Date of Birth:		Roll No.	
Father's Name:			Trade:		
Permanent Postal Address:					
Guardian's Name responsible for training matters:				Relation:	
Guardian's Postal Address:					
Father's/Guardian's Occupational Address:				Tel.No.	
Educational qualifications		Class Year ___	Matric Year ___ Div ___		F.A./F.Sc. Year ___ Div ___
Other Exam/Trade Exp.					
Date of Admission		Trg. Clerk		Off.Superintendent/Head Clerk	



TRAINING RECORD

Period	Attendance %	Theoretical Knowledge									Practical Proficiency			Average %		Initial of Incharge Section		Chief Instructor	
		Technology			Tech. Maths.			Tech. Drg.			Sessional	Test	Total	Theory	Practical	Conduct	Theory		Work shop
		Sessional	Test	Total	Sessional	Test	Total	Sessional	Test	Total									
		40 %	60 %	100 %	40 %	60 %	100 %	40 %	60 %	100 %									
1	Basic Training																		
2	Trade Training I																		
3	Trade Training II																		
4	Trade Training III	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
* Average(1-3) = $\frac{\text{Average Basic Trng.} + \text{Average Trade Trng I} + \text{Average Trade Trng II}}{3}$															Grades for conduct:				
															1 - good				
															2 - satisfact.				
															3 - fair				
															4 - poor				
Trade Certificate No.		Provisional			Original														

Termination: Date: _____ Sem. _____ Reason: _____ Office-Order: _____

Remarks:

*For 12 or 18 months' training courses, average is to be calculated from serial no. 1 or serial no. 1 & 2 respectively.

PROGRESS REPORT FOR APPRENTICES

EMPLOYER: _____ TRADE: _____ PHOTO

 Regd.No. _____
 Date of Commencement: _____
 APPRENTICE: _____ S/O _____ Date of Completion: _____
 POSTAL ADDRESS: _____

INPLANT TRAINING

	Implant Orientation	Implant Training I	Implant Training II
Date of Commencement:			
Training Officer in charge:			
<u>Observations</u>			
Interest in work	very good-good-average-poor	very good-good-average-poor	very good-good-average-poor
Proficiency achieved	very good-good-average-poor	very good-good-average-poor	very good-good-average-poor
Conduct	good-satisfactory-fair-poor	good-satisfactory-fair-poor	good-satisfactory-fair-poor
Attendance			
No. of working days			
No. of days absent			
Date of release to ATC / Final Test			
Signatures of Instr. and Officer in charge			
Observations of the Inspection-Officer			
Marks of			
FINAL TEST			

	Months												%		
	1	2	3	4	5	6	7	8	9	10	11	12			
TRADE THEORY														=====	
Technology Techn. Maths.														=====	
Techn. Drwg.														=====	
PRACTICAL														=====	
Quality of work (functioning, accuracy, method of work)														=====	
Time marks														=====	
TOTAL MARKS														=====	



NAME: _____ s/o _____

Roll No. _____ Educat. qualification: _____

Postal Address: _____

EMPLOYER: _____ TRADE: _____

<u>PRACTICAL PROFICIENCY</u>	Basic Training		Trade Training I "Advance Training"		Trade Training II "Final Training"	
	Sessional	Test	Sessional	Test	Sessional	Test
Date of Commencement:						
Quality of work (functioning, accuracy, method of work)		%		%		%
Time marks	-	+		+		+
TOTAL MARKS	%	%	%	%	%	%
No. of days absent						
Conduct: (good, satis- factory, fair, poor)						
Signatures of Instr. and C.I. in charge						
<u>THEORETICAL KNOWLEDGE</u>	Months 1 - 9		Months 10 - 24		Months 25 - 36	
a) Technology	%	%	%	%	%	%
b) Techn. Mathematics	%	%	%	%	%	%
c) Techn. Drawing	%	%	%	%	%	%
Average	%	%	%	%	%	%
No. of days absent						
Conduct: (good, satis- factory, fair, poor)						
Signatures of Instr. and C.I. in charge						
Date of release						

Remarks: _____