guidelines for instructors

how to assess in practical training

electrician

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DEVELOPMENT CELL
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how to assess in practical training

electrician

revised for electrician
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LIST OF CONTENTS

1. THE RATING CRITERIA

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

1.1 The Quality of Work

The rating in this respect covers the evaluation of measurements, cutting, stripping, lacing, tinning, fabrication of connection ends, functioning etc.

1.2 The Method of Work (for tests only)

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

1.3 Time Control

The time needed to complete 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 done 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 (Appendix 1).

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 accuracy, 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 grade expresses satisfaction.

Poor: (Failed) from 0 up to 59 marks.
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:

10 - 0	for objective evaluation.
10 - 7 - 3 - 0	for subjective evaluation.
10 - 6 - 0	for subjective evaluation.

2.3 The Quality of the Work

2.3.1 Objective evaluation

a. Functioning

10 points = functioning according to drawing
0 points = not functioning

b. Measurements

10 points = actual size is within the given tolerance
0 points = measurement deviates from tolerance

2.3.2 Subjective evaluation

a. General appearance

10 points = completion according to drawing
7 points = minor mistakes
3 points = acceptable, correction possible
0 points = not acceptable, correction not possible

b. Wiring

10 points = correct wiring according to drawing
7 points = minor mistakes
3 points = acceptable, correction possible after changing components
0 points = unacceptable, correction not possible

c. Connecting, cutting

10 points = terminal screws tight, cutting of wires and cables, bending of eyes according to standard
7 points = minor mistakes, correction possible
3 points = not according to standard, but functioning
0 points = unacceptable, correction not possible

d. Soldering

10 points = properly soldered joint

7 points = correctly soldered joint, small impurities

3 points = soldered joint overheated

0 points = cold joint, not acceptable

2.4 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 electrical machines

10 points = skilful and correct application of the equipment

6 points = improper application of tools and instruments

0 points = 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 = careless work in respect of safety

0 points = contravention against electrical safety rules

d. Tidiness at workplace

10 points = tidy workplace

6 points = partly untidy

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

3. TIME CONTROL

Prorated time

The time allowed for completing the exercise 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.

3.1 Time Control for Tests (Appendix 2)

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.

3.2 Time Control for Exercises (Appendix 3)

a. Time control for Basic Training

During Basic Training a fixed number of exercises is to be completed in a certain period. Electricians for example have to produce in the ATC Programme 63 exercises within 24 weeks. If a student completes less exercises due to slow work his average marks will still be calculated on the basis of 63 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.

b. Time control for ATC Programme

In Advanced and 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.

c. 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 has to be completed during this training period. The time used for each workpiece is not to be considered.

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 the student himself has to keep the time record.

Therefore, together with the drawing and the material a "Time Control Card" (Appendix 4) will be given to the student. In this card the instructor has to fill in the name of the student, number 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. power 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. If the completion time is above or below the time allowed the next higher time limit will be considered for calculating the time 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 & dimensions	
b	Sum: Accuracy of work	

Marks obtained / Reduction factor =

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

Time tolerance	Time marks
- 10%	+ 3
- 20%	+ 6
- 30%	+ 9

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

a	Sum: Functioning & dimensions	
b	Sum: Accuracy of work	

Marks obtained / Reduction factor =

Time marks ± + 3

Final marks

Marks for over- and under-time are taken from the "Time value table" (Appendix 3).

4. MARKING FACTOR

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

Guide for Determination of Marking Factor

a. Functioning of main circuit, functioning of control circuit	Factor 4
b. Stripping of armoured cables, welding of cable lugs on aluminium conductors	Factor 3
c. Laying, stripping, lacing and connecting of wires and cables, forming of cable ends, soldering	Factor 2
d. Handling of tools, measuring instruments and machines, sequence of operations, observation of safety rules, tidiness at workplace	Factor 2
e. Rough tolerances	Factor 1

5. MARKING SHEET

5.1 Marking Sheet for Tests (Appendix 1)

This marking sheet contains the already known three rating criteria.

5.1.1 The quality of the work

a. Functioning and dimensions

Because these are objective criteria, the rating is 10 - 0 in order to help the controller to make 'clear-cut' decisions.

No.	Functioning & Dimensions Rating 10-0	Toler-ance	Actual Size	Initial Marks	Marking Factor	Marks
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
					Sum	

Initial marks given by the controller

Factor given for different degree of difficulty

Marks = initial marks multiplied with factor

b. Accuracy of work

For the accuracy of work the rating scale 10 - 7 - 3 - 0 has to be supplied:

No.	Accuracy of work Rating 10-7-3-0	Initial Marks	Marking Factor	Marks
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
			Sum	

5.1.2 Method of work

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

No.	Method of work Rating 10-6-0	Initial Marks	Marking Factor	Marks
1	Handling of tools and instruments etc.			
2	Sequence of operation			
3	Observation of safety rules			
4	Tidiness at workplace			
			Sum	

5.1.3 Time control

To determine the completion time, a time record (in the Marking Sheet, Appendix 1) 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.
The time marks to be added or deducted are found with the help of the Time Value Table (Appendix 2).

Time Record

date	start at	tea break from	tea break to	lunch break from	lunch break to	power break down etc. from	power break down etc. to	stop at	actual working time h
							Completion Time		

5.1.4 Calculation of the Final Result

The testpieces should be evaluated by two controllers. They must check independently the testpiece and find their average initial marks which are recorded in the Marking Sheet. The marks obtained will be calculated by addition of the individual sums 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 marks are calculated.

5.2 Marking Sheet for Exercises

The marking sheet for exercises (Appendix 5) 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 (Appendix 6) 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 exercise 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.

The average of each training period will be calculated by dividing the sum of all final marks by the fixed number of given exercises. However, if an apprentice/trainee is deputed for special assignments/work experience for a period of more than 2 weeks his averages should be calculated from the actual exercises completed during the training period.

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

7. PROGRESS REPORT FOR APPRENTICES

The Progress Report Card consists of two main parts:

7.1 Progress Report on Inplant Training (Appendix 7)

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 the number of working days and the number of days absent in the respective columns.

7.2 Progress Report on Institutional Training (Appendix 8)

The institutional training is divided into three periods:

Basic Training
Trade Training I (Advanced Training)
Trade Training II (Final Training)

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 the Progress Report Card (Appendix 9) by the Training Clerk from the application form of the trainee and counter-checked by the Head Clerk or Office Superintendent.

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

a. Attendance: (in %) — By comparing the number of working days of the institution with the number of working days of the trainee.

b. Sessional:
   a) Theory - home assignment, periodical test etc.
   b) Workshop proficiency - evaluation of exercises as calculated in the assessment card

c. Test: — Result of promotion test

d. 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:

a. Before starting the actual work the participants have to check the materials in respect of specifications, dimensions and number of pieces.

b. Before starting, the test participants should read the drawing carefully and determine the sequence of operations, which tools and materials 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.

c. In case of disturbance, power 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.

d. The testpiece has to be produced solely by the test participant. Any consultation between the participants and help from instructors or from outside is not allowed.

e. 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 measuring instruments

f. After completing the testpiece the participant has to mark every workpiece with his Roll No. and to 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.

Testpiece 1

No	Functioning & Dimensions	Rating 10-0	Tolerance	Actual Size	Initial Marks	Marking Factor	Marks
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
						Sum	

No.	Accuracy of work	Rating 10-7-3-0	Initial Marks	Marking Factor	Marks
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
				Sum	

Testpiece 2

No.	Functioning & Dimensions	Rating 10-0	Tolerance	Actual Size	Initial Marks	Marking Factor	Marks
1							
2							
3							
4							
5							
						Sum	

No	Accuracy of work	Rating 10-7-3-0	Initial Marks	Marking Factor	Marks
1					
2					
3					
4					
				Sum	

TEST	MARKING SHEET	Name Roll No Dat

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ELECTRICIAN GENERAL

Testpiece 3

No.	Accuracy of work & Dimensions — Rating 10-7-3-0	Toler-ance	Actual Size	Initial Marks	Marking Factor	Marks
1						
2						
3						
4						
5						
					Sum	

Testpiece 4

No	Accuracy of work & Dimensions — Rating 10-7-3-0	Toler-ance	Actual Size	Initial Marks	Marking Factor	Marks
1						
2						
3						
4						
5						
					Sum	

No.	Method of work — Rating 10-6-0	Initial Marks	Marking Factor	Marks
1	Handling of tools and instruments etc.			
2	Sequence of operation			
3	Observation of safety rules			
4	Tidiness at workplace			
			Sum	

Time Record

date:	start at:	tea break from	tea break to	lunch break from	lunch break to	power break down etc. from	power break down etc. to	stop at:	actual working time h
								Completion Time	

Time allowed: ____ h

Completion Time ____ h

Difference: ± ____ h

Time Marks: ± ____

Sum Testp. 1 _____

Sum Testp. 2 _____

Sum Testp. 3 _____

Sum Testp. 4 _____

Method of work _____

Marks obtained: _____

$\frac{\text{Marks obtained}}{\text{Reduction factor}}$ = _____

Total Marks: _____

Time Marks: ± _____

Final Marks: _____

Ist. control	IInd. control

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 1h44 min	1h45 min 1h59 min	2h 2h14min	2h15min 2h29min	2h30min 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. 16 h
Completion time. 16 h 40 min
Time marks. = - 1,5

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

TIME VALUE TABLE

for Test only

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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	Marks -3	Marks +6	Marks -6	Marks +9	Marks -9		Marks +3	Marks -3	Marks +6	Marks -6	Marks +9	Marks -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 12^{30} h

- 10 % ⟶ +3 Marks

Example: "Over-Time"

Time allowed 26 h

Completion time 30^{45} h

+ 20 % ⟶ -6 Marks

TIME VALUE TABLE

for exercises

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PAK-GERMAN TECHNICAL TRAINING PROGRAMME

Time control card

Name _____

Roll No _____

Trade _____

Exercise _____

Time allowed ____ h

	date	time
started		
finished		
gross working time		h
total off time –		h
completion time		h

off time date	h	Reason	Signature of instructor

____ h total off time

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

Signature of instructor

Appendix 4

Marking sheet for Exercises

Name _____ Roll No _____

Trade: Electrician Exercise _____

Checked by: _____ Time allowed: ____ h

Completion time: ____ h

Rating 10-0

No	a Functioning & Dimensions	Tolerance	Actual size	Initial marks	Marking Factor	Marks
1						
2						
3						
4						
5						
					Sum	

Rating 10-7-3-0

No	b Accuracy of work	Initial marks	Marking Factor	Marks
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
			Sum	

a	Sum: Functioning & dimensions	
b	Sum: Accuracy of work	

Marks obtained / Reduction factor = _____

Time marks± _____

Final marks: _____

Appendix 5

ASSESSMENT CARD

Trade Training I

Name: _____

Trade: Electrician

Roll No: _____

Checked by: _____

No	Exercise	Marks	No	Exercise	Marks
2.5.1/1	Handling of wire		2.5.2/10	Two-way switch circuit	
2.5.1/2	Handling of wire		2.5.2/11	Two-way switch circuit & socket circuit	
2.5.1/3	Handling of cable		2.5.2/12	Two-way switch circuit & s.p.s.-socket circuit	
2.5.1/4	Handling of wire		2.5.2/13	Intermediate switch circuit	
2.5.1/5	Installing a socket		2.5.2/14	Intermediate switch circuit & socket circuit	
2.5.1/6	Handling of wire		2.5.2/15	Intermediate switch circuit	
2.5.1/7	Lamp-single pole switch		2.5.2/16	Intermediate switch circuit & socket circuit	
2.5.1/8	Handling of cable		2.5.2/17	Intermediate switch circuit & socket circuit	
2.5.1/9	Two way circuit		2.5.3/1	Terminal plate 1	
2.5.1/10	Lamp and socket		2.5.3/2	Terminal plate 2	
2.5.1/11	Two way circuit		2.5.3/3	A. Soldering joint B. Wire joint	
2.5.1/12	Two lamps-multicircuit switch		2.5.3/4	Soldering sheet metal box	
2.5.1/13	Lamp-two way and intermediate switch		2.5.3/5	A. Married joint B. T-joint	
2.5.1/14	Two lamps-multicircuit switch		2.5.3/6	Cross-joint	
2.5.1/15	Lamp-two way and intermediate switch		2.5.3/7	Making of clamps	
2.5.1/16	Lamp-single pole switch-socket		2.5.3/8	Making of clamps	
2.5.1/17	Lamps-single pole switch		2.5.3/9	Making of clamps	
2.5.1/18	Lamps-single pole switch-socket		2.5.3/10	Making of clamps	
2.5.1/19	Lamps-multicircuit switch-socket		2.5.3/11	Handling of conduit pipe	
2.5.1/20	Lamp-two way switch		2.5.3/12	Handling of conduit pipe	
2.5.2/1	Socket circuit		2.5.3/13	Handling of conduit pipe	
2.5.2/2	Single pole switch-socket circuit		2.5.3/14	Handling of conduit pipe	
2.5.2/3	Single pole switch-lamp circuit		2.5.3/15	Installation device	
2.5.2/4	Single pole switch-lamp circuit & socket circuit			Sum II	
2.5.2/5	S.p.switch-lamp circuit & S.p.switch-socket circuit			Sum I _____	
2.5.2/6	Multicircuit-switch circuit			plus Sum II _____	
2.5.2/7	Multicircuit-switch circuit			total I+II _____	
2.5.2/8	Multicircuit-switch circuit & socket circuit			divided by No. of Exercises 52	
2.5.2/9	Multicircuit-switch-lamps & s.p.s.-socket circuit			Trade Training I Sessional =======	
	Sum I				

PROGRESS REPORT FOR APPRENTICES

INPLANT TRAINING

EMPLOYER: _____ TRADE: _____

_____ Regd.No. _____

APPRENTICE: _____ S/O _____ Date of Commencement: _____

POSTAL ADDRESS: _____ Date of Completion: _____

PHOTO

	Inplant Orientation	Inplant Training I	Inplant Training II
Date of Commencement:			
Training Officer in charge:			
Observations			
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	Months			Months											Months								
	1	2	3	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9
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

TRADE THEORY ==========
Technology _____ %
Techn. Maths. _____ %
Techn. Drwg. _____ %

PRACTICAL =========
Quality of work (functioning, accuracy, method of work) _____ %
Time marks ±_____
TOTAL MARKS _____ %

INSTITUTIONAL TRAINING

APPRENTICESHIP TRAINING CENTRE

NAME: _____ s/o _____

Roll No. _____ Educat. qualification: _____

Postal Address: _____

EMPLOYER: _____ TRADE: _____

PRACTICAL PROFICIENCY	Basic Training		Trade Training I "Advance Training"		Trade Training II "Final Training"	
Date of Commencement:						
	Sessional	Test	Sessional	Test	Sessional	Test
Quality of work (functioning, accuracy, method of work)		%		%		%
Time marks	—	±		±		±
TOTAL MARKS	%	%	%	%	%	%
No. of days absent						
Conduct: (good, satisfactory, fair, poor)						
Signatures of Instr. and C.I. in charge						

THEORETICAL KNOWLEDGE	Months 1 - 9		Months 1o - 24		Months 25 - 36	
a) Technology	%	%	%	%	%	%
b) Techn. Mathematics	%	%	%	%	%	%
c) Techn. Drawing	%	%	%	%	%	%
Average	%	%	%	%	%	%
No. of days absent						
Conduct: (good, satisfactory, fair, poor)						
Signatures of Instr. and C.I. in charge						
Date of release						

Remarks: _____

PROGRESS REPORT
FOR TRAINEES

TECHNICAL TRAINING CENTRE

Name:	Date of Birth:	Roll No.
Father's Name:	Trade:	Photo
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 %		Conduct	Initial of Incharge Section		Chief Instructor
			Technology			Tech. Maths.			Tech. Drg.											
			Sessional	Test	Total	Sessional	Test	Total	Sessional	Test	Total	Sessional	Test	Total	Theory	Practical		Theory	Work shop	
			40 %	60 %	100 %	40 %	60 %	100 %	40 %	60 %	100 %	50 %	50 %	100 %						
1	Basic Training																			
2	Trade Training I																			
3	Trade Training II																			
4	Trade Training III			XX	XX		XX	XX		XX	XX		XX	XX						

* 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.