

**ANDHRA PRADESH STATE ROAD TRANSPORT CORPORATION**

No.T1/20(3)/2019-HRD&W

Office of the VC & MD  
RTC House, PNBS,VJA,  
Dt.06.06.2019

**To**

**1)The Dy.Chief Personnel Managers**

**NLR, VJA & VZM**

**2)The Principal, ZSTC**

**KRNL**

**APSRTC**

Sub: **APPRENTICES** – Engagement of ITI Apprentices in the Corporation - Conduct of Practical examination to the ITI Apprentices under All India Trade Test (AITT) - Communication of practical examination syllabus for the various ITI Trades and related instructions thereof - Reg.

Ref: 1.Director(TTC), Controller of Examinations, Govt.of India, Ministry of Skill Development and Entrepreneurship, Director General of Training Lr.No.18013/01/ATS/2019/TCC, dt.23.04.2019.

2.Addl.guidelines issued by Deputy Director of Training, Govt. of India, New Delhi vide Lr.No.MSDE-18013/01/ATS/2019-TTC, dt.31.05.2019.

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APSRTC has been engaging ITI apprentices as per the provisions of The Apprentices Act, 1961 and other guidelines on the subject from time to time. However, of late several changes have been made and revised guidelines are being issued on the subject by the Govt. with a view to give impetus to training of apprentices in order to improve their skill levels and to make them industry ready.

At present, the ITI apprentices on completion of apprenticeship are appearing for the practical exam to test their proficiency. The entire process of conducting practical exam and declaring results is being taken up by Dept.of Emp. & Trg.(DET), Govt. of A.P.

Vide references 1<sup>st</sup> & 2<sup>nd</sup> cited, the Director (TTC), Controller of Examinations, Govt. of India, Ministry of Skill Development and Entrepreneurship, Director General of Training has informed that all establishments registered under Apprentice Training Scheme are allowed as self examination centre for practical exam in AITT (All India Trade Test) for their own apprentices. The evaluation of practical exam may also be done by their own examiner with own question paper. A competent technical person working in the establishment may be appointed as Examiner. The establishments to submit the marks secured by individual candidates to the concerned Apprentice Adviser for processing and declaration of the results. He has enclosed detailed guidelines for conduct of practical exam according to which:-

1. The All India Trade Test (AITT) of Apprentices under Apprenticeship Training Scheme (ASTS) will be held twice in a year in the month of April/May and Oct/November for apprentices registered in establishment under Apprenticeship Act, 1961.

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2. The following Apprentices are eligible to appear in the AITT:
- (i) Apprentices who are registered on apprenticeship portal and who has Appeared and failed in previous AITT exams.
  - (ii) Apprentices registered on apprenticeship portal and completed their training on or before 15<sup>th</sup> April/15<sup>th</sup> October respectively.
  - (iii) Candidates securing minimum 40% in sessionals theory and 60% in practical exam are only eligible for appearing in AITT.
3. All establishments registered under the ATS(Apprentice Training Scheme) are allowed as self examination center for practical exam for their own apprentices and prepare question paper for practical exam as per the following guidelines:
- (i) A competent technical person in the concerned stream in the establishment may be appointed as Examiner.
  - (ii) The time duration of the practical exam is 6 hours normally. However, where required it can be extended up to 8 hours.
  - (iii) A minimum of 3 questions to be given to the apprentice to attempt in the practicals.
  - (iv) The maximum marks for practical exam is 300. Marks may be allotted depending upon the complexity of skills.

The process of conducting the practical exam and awarding marks has therefore now been delegated to the establishment. In order to conduct practical exams at ZSTC by the ZSTC authorities, common syllabus and related guidelines are required. The same is examined in detail and the syllabus for practical exams to be conducted by ZSTCs has been worked out in respect of 9 trades which are in operation in APSRTC.

The following instructions are issued in this regard:-

1. **Trades:** The Corporation is currently engaging ITI Apprentices in 9 trades. Practical exam to test the proficiency shall henceforth be conducted to the ITI apprentices engaged by the Corporation in the following of trades and marks are to be awarded to the individual candidates.

**Trades:**

1. Diesel Mechanic
2. Motor Mechanic
3. Electrician
4. Welder
5. Painter
6. MW Mechanic
7. Machinist
8. Sheet Metal Worker
9. Draughtsman(Civil)

2. **Examiner:** In order to conduct the practical examination to the ITI candidates an examiner with a technical background is to be nominated. The practical exam shall be conducted by the authorities given below:

Trade	Examiner
Diesel Mechanic	Dy.CME of the Region
Motor Mechanic	
Electrician	
Welder	
Painter	
MW Mechanic	
Machinist	
Sheet Metal Worker	
Draughtsman(Civil)	Dy.EE( Civil)

- Exam Venue:** The Dy.CME of the Region shall conduct the practical test either at the Regional Headquarters Depot or Zonal Workshop depending upon his/her convenience. The Dy.EE(Civil) may conduct the exam for the Draughtsman (Civil) trade at his office.
- Syllabus:** The detailed syllabus in trade wise for the practical exam is worked out in detail and annexed to this letter. The practical test shall be conducted as per the scheme and instructions pertaining to that trade.
- Scheme of Practical Test:** In all the trades there are three parts viz Part-A, B & C. In respect of all trades other than Welding the candidate shall be asked to attempt one question from Part-A and two from Part-B. All the three parts are compulsory. In respect of Welder all the questions in part -A, B & C are to be attempted. The scheme of exam broadly is:-

	No.of questions to be attempted	Marks for each question	Total marks
Part-A	1	150	150
Part-B	2	50	100
Part-C	--	--	50
<b>Total</b>			<b>300</b>

The apprentice shall be given choice in part-A and Part-B and from the given questions he shall be asked to attempt 1 question from Part-A and 2 questions from Part-B.

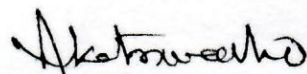
The duration of the practical exam is 6 hours and the examinee has to complete the given item of test within the prescribed time.

The Dy.CME of the Region and the Depot Manager of the Depot where the candidate is undergoing apprenticeship, shall ensure that the apprentice is trained properly on all aspects of the trade in which he is engaged and more specifically train them well in practical test syllabus.

6. **Results:** The result of the practical exam shall be tabulated and the marks obtained by each candidate shall be forwarded to the Principals of ZSTCs. The Principals of ZSTCs shall submit the marks obtained by apprentices in practical exam to the concerned RDD for uploading in portal and declaration of results through apprenticeship portal.

The Principals of all Zonal Staff Training Colleges are advised to take note of the instructions above with regard to conduct of practical test for ITI apprentices and take necessary action as per the above guidelines.

Encl: As above



**Executive Director (A)**

Copy to EDs of all Zones for information

Copy to all the Dy.CMEs for information & necessary action

Copy to all the WMs for information & necessary action

Copy to all DMs for information & necessary action

Copy to the offices of all ZSTCs

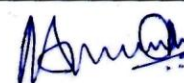
*Copy to all the RMs for information.*

**ITI Apprentices**  
**Scheme of practical examination for**  
**Diesel Mech. Trade/Motor Mech.Trade**

**Duration of the Exam: 6 Hrs.****Trade Code:ITI-DM/MM**

1. Practical exam shall be conducted on the items enumerated below.
2. The time given for completing each item of test is indicated against the item. The candidate has to complete the practical exam within the given time
3. Out of the items for practical test the candidate shall be given one practical test from Part-A, 2 practical tests from Part-B and all tests from Part-C for the practical exam. In objective & subjective features in part - A&B the candidate may be asked to write down requirement of tools, materials, specification, diagram and procedure for 50 marks out of total 250 marks.
4. The maximum marks for practical examination is 300. The candidate shall secure minimum of 180 (60%) marks to be declared as passed.
5. While setting and evaluating the practical tests the examiner shall keep in mind the kind of training imparted to the Apprentices in the Depot garages and assess accordingly.

Sl. No.	Item of test	Time given for completion	Max. Marks for each item	No.of questions to be attempted	Total marks
<b>PART-A (Objective &amp; Subjective features)</b>					
1	Setting of tappet clearance, cylinder head nut tightening in the order of sequence	2 ½ Hrs.	150	1	150
2	Rear & Front hub setting using dial guage	2 ½ Hrs.			
3	Water pump assembly. Clutch disc changing & adjustment.	2 ½ Hrs.			
4	Power Steering box Seals replacement. Gear box selector mechanism dismantling & assembly.	2 ½ Hrs.			
<b>PART-B (Objective &amp; Subjective features)</b>					
1	Clutch Master Cyl./Slave Cyl./Booster Assembly	1 Hr.	50	2	100
2	Feed pump assembly & injector testing	1 Hr.			
3	Attending Air lock (both Rotary & Inline FIP systems)	1 Hr.			
4	4 Wheel Brakes adjustment with manual & automatic slack adjuster	1 Hr.			
5	Air pressure setting in Unloader Valve/Air Dryer	1 Hr.			
6	Checking functioning of System Protection Valve replacement of Air Bellow on Air Suspension vehicles	1 Hr.			
7	Fitment of pneumatic wiper	1 Hr.			
<b>PART-C (Attitudinal features)</b>					
1	Safety	1 Hr.	25	--	25
2	House keeping				
3	Initiative				
4	Cooperation				
5	Communication				
6	Viva-voce	30 Mts	25	--	25
	<b>Total</b>	<b>6 Hrs.</b>			<b>300</b>



**ITI Apprentices****Scheme of practical examination for Electrician Trade****Duration of the Exam: 6 Hrs.****Trade Code:ITI-ELEC**

1. Practical exam shall be conducted on the items enumerated below.
2. The time given for completing each item of test is indicated against the item. The candidate has to complete the practical exam within the given time
3. Out of the items for practical test the candidate shall be given one practical test from Part-A, 2 practical tests from Part-B and all tests from Part-C for the practical exam. In objective & subjective features in part - A&B the candidate may be asked to write down requirement of tools, materials, specification, diagram and procedure for 50 marks out of total 250 marks.
4. The maximum marks for practical examination is 300. The candidate shall secure minimum of 180 (60%) marks to be declared as passed.
5. While setting and evaluating the practical tests the examiner shall keep in mind the kind of training imparted to the Apprentices in the Depot garages and assess accordingly.

Sl. No.	Item of test	Time given for completion	Max. Marks for each Item	No. of questions to be attempted	Total marks
<b>PART-A (Objective &amp; Subjective features)</b>					
1	Fitment of Head Light Assembly	2 ½ Hrs.	150	1	150
2	Indicator Lamps Fitment	2 ½ Hrs.			
3	Wiper Machine Fitment	2 ½ Hrs.			
4	Roof Lights Fitment	2 ½ Hrs.			
5	Complete Internal wiring in the Bus	2 ½ Hrs.			
<b>PART-B (Objective &amp; Subjective features)</b>					
1	Dipper Switch Fitment	1 Hr.	50	2	100
2	Battery cut off switch fitment, Battery – Specific gravity reading and voltage checking	1 Hr.			
3	Alternator – Giving connection and checking its functionality	1 Hr.			
4	Self Starter – giving connection and checking its functionality along with switch	1 Hr.			
5	Sensors /Destination Boards LED / Dash Board wiring	1 Hr.			
<b>PART-C (Attitudinal features)</b>					
1	Safety	1 Hr.	25	--	25
2	House keeping				
3	Initiative				
4	Cooperation				
5	Communication				
6	Viva-Voce	30 Mts.	25	--	25
	<b>Total</b>	<b>6 Hrs.</b>			<b>300</b>



## ITI Apprentices

## Scheme of practical examination for Mill Wright Mechanic Trade

Duration of the Exam: 6 Hrs.

Trade Code:ITI- MWM

1. Practical exam shall be conducted on the items enumerated below.
2. The time given for completing each item of test is indicated against the item. The candidate has to complete the practical exam within the given time
3. Out of the items for practical test the candidate shall be given one practical test from Part-A, 2 practical tests from Part-B and all tests from Part-C for the practical exam. In objective & subjective features in part – A&B the candidate may be asked to write down requirement of tools, materials, specification, diagram and procedure for 50 marks out of total 250 marks.
4. The maximum marks for practical examination is 300. The candidate shall secure minimum of 180 (60%) marks to be declared as passed.
5. While setting and evaluating the practical tests the examiner shall keep in mind the kind of training imparted to the Apprentices in the Depot garages and assess accordingly.

Sl. No.	Item of test	Time given for completion	Max. Marks for each Item	No. of questions to be attempted	Total marks
<b>PART-A (Objective &amp; Subjective features)</b>					
1	Dovetail Joint	2 ½ Hrs.	150	1	150
2	Preparation of Hexagonal Piece from round MS rod	2 ½ Hrs.			
3	Dismantling and assembling of a)High pressure washing machine b)Trouble shooting & parts identification in Automatic Washing Plant	2 ½ Hrs.			
4	Dismantling and assembling of a)High pressure grease gun b)Hydraulic Jack – both vehicle and trolley	2 ½ Hrs.			
5	Dismantling and assembling of a)Mechanical Jack b) Jib Crane gear Mechanism	2 ½ Hrs.			
<b>PART-B (Objective &amp; Subjective features)</b>					
1	Removal of broken studs	1 Hr.	50	2	100
2	Fitment of ferrules in oversize dia holes	1 Hr.			
3	Bushing sleeving and rethreading wherever necessary – I Beam Boss viz., Front Axle, Rear Axle, Water Pump etc.,	1 Hr.			
4	Overhauling of well pumps and motors for depot	1 Hr.			
5	Air Pipes joining/leak checking	1 Hr.			
6	Service and maintenance & overhaul of riveting gun both Mechanical & pneumatic	1 Hr.			
7	Water pump coupling and well pump coupling alignment & joining	1 Hr.			
8	Identifying the parts and explaining the function of Air Compressor	1 Hr.			
<b>PART-C (Attitudinal features)</b>					
1	Safety	1 Hr.	25	--	25
2	House keeping				
3	Initiative				
4	Cooperation				
5	Communication				
6	Viva-voce	30 Mts	25	--	25
	<b>Total</b>	<b>6 Hrs.</b>			<b>300</b>

**ITI Apprentices****Scheme of practical examination for Painter Trade****Duration of Exam : 6 Hrs.****Trade Code:ITI-Painter**

1. Practical exam shall be conducted on the items enumerated below.
2. The time given for completing each item of test is indicated against the item. The candidate has to complete the practical exam within the given time
3. Out of the items for practical test the candidate shall be given one practical test from Part-A, 2 practical tests from Part-B and all tests from Part-C for the practical exam. In objective & subjective features in part - A&B the candidate may be asked to write down requirement of tools, materials, specification, diagram and procedure for 50 marks out of total 250 marks.
4. The maximum marks for practical examination is 300. The candidate shall secure minimum of 180 (60%) marks to be declared as passed.
5. While setting and evaluating the practical tests the examiner shall keep in mind the kind of training imparted to the Apprentices in the Depot garages and assess accordingly.

Sl. No.	Item of test	Time given for completion	Max. Marks for each item	No. of questions to be attempted	Total marks
<b>PART-A (Objective &amp; Subjective features)</b>					
1	Sketching the APSRTC emblem on a panel	2 ½ Hrs.	150	1	150
2	Painting a Destination board with round letters in Telugu	2 ½ Hrs.			
3	Painting a Destination board in English(different fonts)	2 ½ Hrs.			
4	Stencil cutting of one of our slogans	2 ½ Hrs.			
<b>PART-B (Objective &amp; Subjective features)</b>					
1	Spray painting on a panel & Painting of Stripes for Express type	1 Hr.	50	2	100
2	Painting a Super luxury, Deluxe letters on vehicles (Italic, Roman Bold and old English)	1 Hr.			
3	Putties - Applying putti on dents	1 Hr.			
4	Mixing of paints to the given colour shade	1 Hr.			
5	Glaze coating of painting including mixing paint for this purpose	1 Hr.			
6	Stickers, re-painting, Graphics painting using masking tapes	1 Hr.			
<b>PART-C (Attitudinal features)</b>					
1	Safety	1 Hr.	25	--	25
2	House keeping				
3	Initiative				
4	Cooperation				
5	Communication				
6	Viva-voce	30 Mts	25	--	25
	<b>Total</b>	<b>6 Hrs.</b>			<b>300</b>

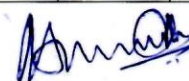




**ITI Apprentices****Scheme of practical examination for Machinist Trade****Duration of the Exam: 6 Hrs.****Trade Code:ITI-MACH**

1. Practical exam shall be conducted on the items enumerated below.
2. The time given for completing each item of test is indicated against the item. The candidate has to complete the practical exam within the given time
3. Out of the items for practical test the candidate shall be given one practical test from Part-A, 2 practical tests from Part-B and all tests from Part-C for the practical exam. In objective & subjective features in part - A&B the candidate may be asked to write down requirement of tools, materials, specification, diagram and procedure for 50 marks out of total 250 marks.
4. The maximum marks for practical examination is 300. The candidate shall secure minimum of 180 (60%) marks to be declared as passed.
5. While setting and evaluating the practical tests the examiner shall keep in mind the kind of training imparted to the Apprentices in the Depot garages and assess accordingly.

Sl. No.	Item of test	Time given for completion	Max. Marks for each Item	No. of questions to be attempted	Total marks
<b>PART-A (Objective &amp; Subjective features)</b>					
1	Cylinder Block Line Boring	2 ½ Hrs.	150	1	150
2	Brake Drum Skimming and PP shaft cutting and turning	2 ½ Hrs.			
3	Skimming of Clutch Pressure Plate and Cylinder Head Surface Grinding	2 ½ Hrs.			
<b>PART-B (Objective &amp; Subjective features)</b>					
1	Valve Grinding one set (i.e., Inlet or Exhaust Valves) and Threading on Gear Box Main Shaft	1 Hr.	50	2	100
2	Boring of connecting Rod Small End for fitment of O/s Bush and fitting of connecting Rod Bushes and Reaming.	1 Hr.			
3	Air Compressor boring and Honing	1 Hr.			
<b>PART-C (Attitudinal features)</b>					
1	Safety	1 Hr.	25	--	25
2	House keeping				
3	Initiative				
4	Cooperation				
5	Communication				
6	Viva-Voce	30 Mts.	25	--	25
	<b>Total</b>	<b>6 Hrs.</b>			<b>300</b>



**ITI Apprentices****Scheme of practical examination for Sheet Metal Worker Trade****Duration of Exam : 6 Hrs.****Trade Code:ITI-SMW**

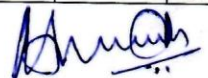
1. Practical exam shall be conducted on the items enumerated below.
2. The time given for completing each item of test is indicated against the item. The candidate has to complete the practical exam within the given time
3. Out of the items for practical test the candidate shall be given one practical test from Part-A, 2 practical tests from Part-B and all tests from Part-C for the practical exam. In objective & subjective features in part – A&B the candidate may be asked to write down requirement of tools, materials, specification, diagram and procedure for 50 marks out of total 250 marks.
4. The max. Marks for practical examination is 300. The candidate shall secure mim.of 180 (60%) marks to be declared as passed.
5. While setting and evaluating the practical tests the examiner shall keep in mind the kind of training imparted to the Apprentices in the Depot garages and assess accordingly.

Sl. No.	Item of test	Time given for completion	Max. Marks for each item	No. of questions to be attempted	Total marks
<b>PART-A (Objective &amp; Subjective features)</b>					
1	Fabrication of Battery box/Tool box. Fabrication of measuring cans of 100 ML, 250 ML, 500 ML and 1 Litre.	2 ½ Hrs.	150	1	150
2	Fabrication of First aid box. Fabrication of M.S.tin boxes for conductor	2 ½ Hrs.			
3	Fabrication of corner dooms of vehicle (including roof corner)	2 ½ Hrs.			
4	JK Door Repair/fitment	2 ½ Hrs.			
<b>PART-B (Objective &amp; Subjective features)</b>					
1	Roof hatch opening as per drawing	1 Hr.	50	2	100
2	Dash board panelling	1 Hr.			
3	Driver door, shutter frames fitment duly replacing terene felt/Flocked rubber channel	1 Hr.			
4	Hemming joint	1 Hr.			
5	Solid riveting (Cleats)	1 Hr.			
6	Bonnet repairs	1 Hr.			
7	Panels dent removal, replacement of panels using solid/pop rivets	1 Hr.			
8	Wind shield Glass fitment (two piece type)	1 Hr.			
9	Fabrication of sunken type roof light frame	1 Hr.			
10	Fabrication of sunken type Number plate	1 Hr.			
11	Fabrication of Head light doom foundation of both Tata & Leyland	1 Hr.			
<b>PART-C (Attitudinal features)</b>					
1	Safety	1 Hr.	25	--	25
2	House keeping				
3	Initiative				
4	Cooperation				
5	Communication				
6	Viva-voce	30 Mts	25	--	25
	<b>Total</b>	<b>6 Hrs.</b>			<b>300</b>

**ITI Apprentices****Scheme of practical examination for Welder (Gas&Electric) Trade****Duration of the Exam: 6 Hrs.****Trade Code:ITI-WLD**

1. Practical exam shall be conducted on the items enumerated below.
2. The time given for completing each item of test is indicated against the item. The candidate has to complete the practical exam within the given time
3. The maximum marks for practical examination is 300. The candidate shall secure minimum of 180 (60%) marks to be declared as passed.
4. While setting and evaluating the practical tests the examiner shall keep in mind the kind of training imparted to the Apprentices in the Depot garages and assess accordingly.

Sl. No.	Item of test	Time given for completion	Max. Marks for each Item	No. of questions to be attempted	Total marks
<b>PART-A (Objective &amp; Subjective features)</b>					
1	(i) Prepare the following job as per the figures by arc welding from the given material (mild steel) at all position A, B&C (as per diagram enclosed). (ii) Write the sequence of operations with safety precautions observed in completing the job. Also list the tools & equipments required for preparing the job.	2 ½ Hrs.	150	1	150
2	(i) Prepare the following job by Oxy-Acetylene Welding as per the figure from the given material (Mild Steel) (as per diagram enclosed). (ii) Write the sequence of operations with safety precautions observed in completing the job. Also list the tools & equipments required for preparing the job.	2 ½ Hrs.	100	1	100
<b>PART-B (Attitudinal features)</b>					
1	Safety	1 Hr.	25	--	25
2	House keeping				
3	Initiative				
4	Cooperation				
5	Communication				
6	Viva-Voce	30 Mts.	25	--	25
	<b>Total</b>	<b>6 Hrs.</b>			<b>300</b>



**ITI Apprentices****Scheme of practical examination for Draughtsman (Civil)****Duration of the Exam: 6 Hrs.****Trade Code:ITI-CIVIL**

1. Practical exam shall be conducted on the items enumerated below.
2. The time given for completing each item of test is indicated against the item. The candidate has to complete the practical exam within the given time
3. Out of the items for practical test the candidate shall be given one practical test from Part-A, 2 practical tests from Part-B and all tests from Part-C for the practical exam. In objective & subjective features in part – A&B the candidate may be asked to write down requirement of tools, materials, specification, diagram and procedure for 50 marks out of total 250 marks.
4. The maximum marks for practical examination is 300. The candidate shall secure minimum of 180 (60%) marks to be declared as passed.
5. While setting and evaluating the practical tests the examiner shall keep in mind the kind of training imparted to the Apprentices in the Depot garages and assess accordingly.

Sl. No.	Item of test	Time given for completion	Max. Marks for each Item	No. of questions to be attempted	Total marks
<b>PART-A (Objective &amp; Subjective features)</b>					
1	Draw the lay out plan of a Bus Depot with a perfect rectangular site measurement of East-122Mx North-96M showing all the required structures of standard sizes	2 ½ Hrs.	150	1	150
2	Draw the plans of 45 /45 & 60 /30 plat forms of a Bus Station with 9 platforms, enquiry room, stair care, shops, Porch in detail	2 ½ Hrs.			
3	Draw the septic tank for 200 users showing plan, section & elevation in detail.	2 ½ Hrs.			
<b>PART-B (Objective &amp; Subjective features)</b>					
1	Draw a typical two bed room house plan, section & Elevation for about 1200 Sft, showing North direction.	1 Hr.	50	2	100
2	Draw the plan & isometric brick masonry corner connection in English bond with 14" thick brick wall	1 Hr.			
3	Draw the details of standard Inspection Pit in Garage	1 Hr.			
4	Draw the lintel Beam and chejjas with reinforcement details over door of 4'0"x7'0" size & cantilevers portico of 5'0"	1 Hr.			
5	2 types of stair cases with plan, elevation & isometric view	1 Hr.			
<b>PART-C (Attitudinal features)</b>					
1	Safety	1 Hr.	25	--	25
2	House keeping				
3	Initiative				
4	Cooperation				
5	Communication				
6	Viva-Voce	30 Mts.	25	--	25
	<b>Total</b>	<b>6 Hrs.</b>			<b>300</b>